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BUILDING A STRONGER FOUNDATION: A FRAMEWORK FOR PLANNING AND EVALUATING COMMUNITY-BASED HEALTH SERVICES IN CANADA

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EXECUTIVE SUMMARY

INTRODUCTION

Extensive reviews of provincial and territorial health systems over the past decade have resulted in a renewed interest in community-based health service delivery models as alternatives to institutional care. While Canada has a well developed health care system, it also has one of the highest rates of institutionalization in the world. It is recognized that health services encompass much more than institutional services and includes self-care, disease prevention, health promotion and protection, community support, ambulatory primary care and rehabilitative services. It is increasingly apparent that many individuals being treated in institutional settings could more appropriately be seen in a community setting, and indeed, would prefer to receive their services in the context of their daily lives.

Although policy makers have long acknowledged and advocated for a greater balance in emphasis between the institutional and community-based sectors of the health system, in reality, little evidence exists to support the contention that a substantial shift has actually occurred in Canada. In most provinces, community-based health services remain a fragmented set of marginalized services. The World Health Organization vision of a primary health care system as the "nucleus... central function and main focus of the health system" (WHO, 1978, p. 3) remains an elusive goal in Canada. Even in provinces which have attempted integrated and comprehensive models of community-based services delivery, the total health services dollars dedicated to these models remain only a small fraction of those spent on the institutional sector.

The health services delivery system is a labour-intensive industry. Personnel account for 70 percent or more of the costs to the health system. Human resources play an especially prominent role in and account for an even greater share of the costs of community-based health services when compared to institutional services, due to less reliance on facilities and advanced technologies. The shift to community-based health services inevitably affects how health human resources are conceptualized, utilized, managed and regulated. The way human resources are employed, in turn, affects how community-based health services are delivered and how effective they will be.

As policy makers in Canadian provinces and territories review their progress in accomplishing a shift from institutional to community-based health services delivery, several questions are of fundamental relevance:

> To what extent has a comprehensive community-based health services delivery system been achieved?
>
> To what extent are intended outcomes of community-based health services achieved?
>
> Are the best organizational and human resource management approaches being used?

The current study was undertaken for the Federal/Provincial/Territorial Deputy Ministers of Health with the objective of developing a flexible policy (planning) and evaluation framework which will address these questions while acknowledging the different needs of Canadian jurisdictions operating at different stages of health care reform.

METHODOLOGY

The study involved three critical information collection and analysis stages undertaken as preliminary steps to the development of the framework.

i. **Systematic Review of Health Human Resources Issues in Community-Based Health Services**. This component of the study involved a critical appraisal of the literature with respect to the relationship between health human resource *modalities* (i.e., major dimensions) and desired outcomes of community-based health services delivery. The five outcomes included in the study were: *service effectiveness/quality, economic efficiency, equity, consumer/community empowerment,* and *quality of worklife*. Six human resource modalities were studied:

   Health human resources continuum (i.e., the use of self-care, informal and formal health service providers);

   Provider roles (i.e., role substitution, expansion and diversification);

   Skills acquisition (i.e., training and education of providers);

   Models of personnel configuration and provider remuneration;

   Statutory regulation of health occupations; and

   Management of the health workforce.

ii. **Systematic Review of Organizational Issues Associated with Community-Based Health Services**. This component involved a critical appraisal of the available literature on the relationship between organizational modalities and desired outcomes. The five organizational modalities studied were:

   Governance;

   Service delivery approaches;

   Funding models;

   Service catchment; and

   Organization and management of services.

iii. **Site Visits**. Site visits to 22 selected community-based health services organizations or programs were undertaken across seven Canadian provinces and territories. These site visits complemented the literature reviews by providing information based upon the practical experiences of those providing community-based health services in different service delivery models.

The results of these three project initiatives are available in companion documents to this report.

Following the literature reviews and site visits, a framework for planning and evaluating community-based health services was developed with the input of individuals across Canada who possess extensive backgrounds in community-based health services. This input was obtained during a one-day focus group session and through reviews of written drafts of the framework.

TERMINOLOGY AND FRAMEWORK

The concept of *community-based health services* has evolved from a variety of perspectives in Canada over the past quarter century. These perspectives reflect the range of service delivery models evident across the country and include community health centres (CHCs), centres locaux des services communautaires (CLSCs), home care programs, primary medical care organizations, and public health agencies. Although no universally accepted definition of community-based health services exists, most would agree that it means bringing services as close as possible to where people live and work, and providing health services outside of hospitals and other institutions. The definition adopted for this document closely follows the World Health Organization (WHO) definition of *Primary Health Care*:

> *"Primary Health Care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford . . . . It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process . . . Primary Health Care addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly" (WHO, 1978, p. 3).*

It is important to note what primary health care is and what it is not.

It is not:

> "primary medical care;
> only first contact medical or health care...

It is intended:

> to reach everybody, particularly those in greatest need;
> to reach to the home and family level, and not be limited to health facilities;
> to involve a continuing relationship with persons and families" (WHO, 1988, pp. 15-16).

The policy and evaluation framework is based on an ongoing management cycle involving the following four key activities:

> Community Needs Assessment;
> Planning;
> Implementation; and
> Evaluation of community-based health services.

The planning and evaluation phases of this cycle are organized around the outcomes, processes and structures of community-based health services. This enables consideration of what results are achieved as well as the incorporation of those service strategies and resource approaches which have been found to be most appropriate for achieving the desired results.

Four primary **outcomes** that community-based health services attempt to achieve are proposed in the framework: service effectiveness, economic efficiency, equity, and consumer/community empowerment. Due to the emphasis of this study on health human resources issues, a fifth *intermediate* outcome is included: quality of worklife. In the planning section of the document, suggested goal statements are provided for each of these outcomes. In the evaluation section of the document, suggested evaluation questions and related measures are listed. Specific outcome measurement indicators are appended.

This study's literature reviews and site visit findings identified a number of organizational and health human resource **processes** and **structures** which have been found to be related, either empirically or experientially, to the achievement of desired outcomes. In the planning component of the framework, goal statements involving "optimal" processes and structures are presented. In the evaluation component of the framework, evaluation questions which mirror the goal statements are suggested. These questions enable assessment of the extent to which the goals have been achieved (i.e., a determination of whether optimal processes and structures were used). Again, specific measurement indicators are presented in an appendix.

The framework represents a starting point for those contemplating the evaluation or further design of their community-based health services system. Because different jurisdictions are at different stages of development and have different needs, it is not feasible to have a one-size-fits-all framework. Rather, the goals and evaluation questions, as well as the more detailed indicators presented in the appendices are a guide for undertaking further activity according to the needs of each jurisdiction. Suggested steps and considerations in the application of the framework are included in the document.

CONCLUSION AND KEY DIRECTIONS

It is difficult to state at what point an existing service delivery model has truly embraced the concept and principles of a *substantive* community-based health services delivery system, as enunciated by the World Health Organization's definition of *primary health care*. This study did not set out to evaluate different community-based service delivery models (e.g., CHCs, CLSCs, HMOs) but to develop a framework whereby such evaluations can be conducted. Because previous studies have noted extreme variations within models, this study took the approach of identifying the relevant dimensions of models (i.e., *modalities*) which are considered to be the most appropriate for achieving desired outcomes. Thus, health human resources and organizational modalities such as provider roles, health workforce management, governance, service delivery approaches, and funding models were incorporated.

Having now identified the desirable characteristics of community-based service delivery models, however, it is possible to attempt comparisons across alternative models. For example, it is noted that some service delivery models encountered during the study closely approximate the concept of community-based health services, as defined and advocated in this framework (e.g., CLSCs). Other models demonstrate only a limited number of the desired characteristics (e.g., those involving defined population catchment areas in which service delivery is dominated by single-discipline providers working under a capitation payment system). These latter models, while potentially forming a sub-set of a community-based health services delivery system, do not capture the comprehensiveness and cohesiveness of the substantive system advocated in this framework.

The framework identifies the following key directions for community-based health services in Canada:

i. **Community-based health services delivery systems which are comprehensive, integrated and substantive.**

In order to accomplish the World Health Organization vision of community-based health services as a "central function and main focus" of the health system, it is necessary to acknowledge the very different but complementary objectives and approaches evident in institutional and community-based health services. The strengths of community-based services are its holistic and social oriented approaches to addressing individual and population health needs and its emphasis on working jointly with natural community partners in addressing the underlying determinants of health. In contrast, the strength of the institutional sector is in the development and application of specialized technological responses to specific health issues. In order for the health system to become more effective as a whole, it is suggested that these two sectors should be afforded equal and complementary status in addressing the multi-dimensional nature of health issues evident in today's society.

For years, community-based health services in most Canadian jurisdictions have been offered to Canadians through a complex array of fragmented service delivery organizations and programs. These include public health agencies or departments, home care programs, primary medical care clinics, social services agencies, mental health departments, and the various forms of community health centres evident across the country. Coordination between service providers has often been lacking, leaving the consumer to fend for him or herself through numerous referral processes, service providers and locations. In addition, the availability of some community-based health services has been inconsistent across a province or territory.

The concept advocated in this framework involves greater comprehensiveness and integration of community-based health services which are offered to consumers in readily accessible neighbourhood locations. As well, the system of community-based health services should encompass the entire province or territory.

ii. **Incorporation of organizational and human resources approaches which contribute to the desired outcomes of community-based health services.**

It is apparent, both through the literature reviews and the site visits undertaken as part of this study, that better ways of conceptualizing and delivering community-based health services exist than are currently practiced. Although no one Canadian model of community-based health services delivery is advocated for all jurisdictions, a desirable model should incorporate the following thirteen organizational and human resource management characteristics in order to achieve the outcomes desired of a comprehensive, integrated, and substantive community-based health service delivery model:

a **clear definition of "community"** based on geographical territory or common need;

a **comprehensive range of *coordinated* health promotion, prevention, primary curative, rehabilitative and community support services** which address the ongoing needs of the community under consideration, as well as the special needs of high-risk and vulnerable clients;

integrated, interdisciplinary, multi-service teams of providers with case coordination for each high need client or family;

client choice in the selection of provider and intervention strategies within reasonable parameters;

population-based funding of service jurisdictions, adjusted for health need;

non fee-for-service remuneration of service providers;

partnership between consumers and providers in the planning, delivery and evaluation of the health services delivery system (i.e., consumer involvement in decision-making occurs beyond a token level);

effective **partnership with other community organizations** in addressing the social and physical environmental determinants of health and to ensure health services are continuous with and complementary to other community services;

a human resources continuum which incorporates the appropriate use of and support for **self-care, informal and formal service providers**;

use of the **most effective and economically efficient health service providers**;

training/education of health services providers (self-care, informal and formal) consistent with the philosophy, objectives and approaches inherent in community-based health services delivery (i.e., broad understanding of health and its determinants; interdisciplinary team approaches; and a focus on promotion/prevention and early intervention);

legislative, organizational and professional policies which enable the use of cost-effective alternative service providers and which do not unnecessarily restrict competitive and creative professional practices; and

positive and flexible management practices.

1 INTRODUCTION

Extensive reviews of provincial and territorial health systems over the past decade have resulted in a renewed emphasis on community-based health service delivery models as alternatives to institutional care. This shift is closely related to other trends evident across the country. These include a move to regionalization and devolution, re-definition of health service provider roles, greater community involvement in decision-making, and stronger partnerships between health services providers and between the health system and other sectors of society (Health and Welfare Canada, 1993).

While Canada has a well developed health care system, it also has one of the highest rates of institutionalization in the world. It may be argued that institutionalization leads to unnecessary centralization, specialization and hierarchy, as well as an undue emphasis on curative care. However, it has become evident that health care is more than institutional care. It encompasses a much wider range of services and activities, including self-care, disease prevention, health promotion and protection, community support, ambulatory primary care, chronic care and rehabilitative services. It is increasingly recognized that many individuals being treated in institutional settings could more appropriately be seen in a community setting, and indeed, would prefer to receive their services in the context of their daily lives.

Although no universally accepted definition of community-based health services exists, most would agree that it means bringing services as close as possible to where people live and work, and providing health services outside of hospitals and other institutions. Predicated on the belief that most health care needs can be met in community settings and do not require major professional interventions, the notion of community-based health services emphasizes decentralized decision-making and service provision, consumer and community participation, holistic and team approaches, a more rational use of health resources, greater responsibility by individuals for their well-being, self-help and a prevention and health promotion orientation. However, accurately assessing the economic and other benefits of community-based health services models has been problematic.

Health care is a labour-intensive industry. Personnel account for 70 percent or more of the costs to the health system. Human resources play an especially prominent role in and account for an even greater share of the costs of community-based health services when compared with institutional services due to less reliance on facilities and advanced technologies. The shift to community-based health services inevitably affects how health human resources are conceptualized, utilized, managed and regulated. The way human resources are handled, in turn, affects how community-based health services are delivered and how effective they will be. Thus, it is not coincidental that as the health system undergoes major changes, many landmark reports of premier's councils, health care commissions and task forces have recommended review or reform of the health workforce (Angus, 1991). Fiscal constraints in recent years have resulted in calls for employing the *right person* for the *right services* in the *right place* at the *right time*.

2 PROJECT OVERVIEW

2.1 Purpose

In order to more fully understand the nature of community-based health services and to develop a useful framework for designing and evaluating initiatives, the Federal/ Provincial/Territorial Advisory Committee on Health Human Resources commissioned a study of organizational and health human resource issues. The objective of the initiative is the development of a flexible policy and evaluation framework based on goals similar to those set out in *Planning for Health: Toward Informed Decision-Making* (Health & Welfare Canada, 1993):

Improvement or maintenance of the health status of Canadians;
Efficacy;
Integration and coordination;
Empowerment of citizens through involvement in health system management;
Responsivity;
Equity;
Improved cost-effectiveness.

The intention of the initiative is to address the planning and evaluation needs of different Canadian jurisdictions at different stages of health care reform and with different health priorities.

2.2 Methodology

The entire project has three components.

Component One: Systematic Review of Health Human Resource Issues in Community-Based Health Services. This component involved the critical appraisal of information available in the literature on efficiencies and effectiveness in the employment of health human resources in community-based health services.

Component Two: Systematic Review of Organizational Models for Community-Based Health Services. This involved the critical appraisal of information and evidence available in the literature on the quality and effectiveness of organizational dimensions for community-based health services.

Component Three: Terminology and Framework for Evaluation and Policy Decisions for Community-Based Health Services. This involves clarifying what is meant by *community-based health services* and the development of a framework for planning and evaluating community-based health services. The framework developed is based both on the results of the literature reviews conducted in the first two components and on the experiences of current community-based health services organizations across Canada. This document is the report of this third component.

Previous literature reviews had noted that existing community-based service delivery models demonstrate as much variation within models as across models. For example, a *Community Health*

Centre model may be considerably different across Canadian jurisdictions, or even, within a given province or territory. In order to design or evaluate community-based health services models, it is important to understand which dimensions of the model are important in achieving desired outcomes. Therefore, at the outset, a decision was made to focus on *modalities* (i.e., dimensions) rather than on specific organizational models.

Components One and Two literature reviews were undertaken to assess the extent to which selected health human resources and organizational modalities have been found to be linked to specified outcomes. The six human resources modalities studied represent major issues and concerns for health human resources planners, policy-makers and researchers:

Health human resources continuum;
Roles of providers and role substitution, expansion and diversification;
Education, training and knowledge/skills acquisition;
Models of personnel configuration and provider remuneration;
Statutory regulation of health occupations; and
Management of the health workforce.

The five organizational modalities studied were:

Governance;
Service delivery approaches;
Funding models;
Service catchment; and
Organization and management of services.

The specific outcomes against which the above human resource and organizational modalities were evaluated were:

Service effectiveness;
Economic efficiency;
Equity;
Consumer and community empowerment; and
Quality of worklife[1]

In order to complement anticipated gaps in the literature and to benefit from the practical experiences of existing community-based health services organizations, a series of site visits was conducted to 22 selected community-based organizations in six provinces and one territory. In addition to the site visits, a one-day focus group session involving participants with extensive backgrounds in community-based health services was held to solicit input into the development of the framework.

The results of Components One and Two as well as a summary of the site visit findings are available in companion documents to this Component Three report. Although they may be read as stand-alone

1 The outcome terms used in Component One and Two reports are different although the concepts have remained the same (e.g., economic efficiency = value for money)

documents, each forms an integral part of the complete study and, together, they offer a comprehensive and in-depth review to the reader.

2.3 Summary of Component One and Two Findings

Health Human Resources

Four key issues were identified in the health human resources literature review.

> Health human resources need to be re-conceptualized if community-based health services are to become effective, holistic and client-focused. The traditional view of health human resources, which tends to focus almost exclusively on formal providers with extensive training, must be replaced by one that sees health human resources as a continuum, ranging from those who keep themselves healthy to those who look after their sick or disabled relatives and friends, and from indigenous health workers who receive mostly on-the-job training to highly qualified specialists.
>
> Compared with many other countries, Canada lags far behind in health human resource substitution. Use of nurse practitioners is relatively rare except in isolated communities and in the far north. Midwifery has not been officially recognized until very recently. As a matter of fact, reverse substitution is often practised in Canada. Highly qualified or extensively trained practitioners have taken over functions that have been adequately performed by lower-level providers.
>
> Reform of the present system of occupational regulation is necessary for designing and implementing a health human resources policy that would support effective and efficient community-based health services. The literature review found evidence that inappropriate occupational regulation could lead to higher costs and personnel maldistribution or shortages.
>
> The effectiveness of practitioners providing community-based health services and their quality of worklife could be improved by various educational and management measures. Similarly, the way providers are organized, deployed and remunerated can also affect the quality and cost effectiveness of their services. However, there is neither a magic formula nor a simple solution for all problems. As community-based health services encompass a wide range of services and models, policy makers must experiment with different approaches, using the experiences obtained in other programs and jurisdictions as a guide and a source of inspiration.

Organizational Modalities

The key policy issues identified in the literature review on organizational modalities are as follows:

> In general, the literature sheds little light on the identification of optimal governance structures for the delivery of community-based health services. Traditional means of ensuring accountability and enhancing community control of community-based health delivery models do not appear to have been very effective. It is suggested that greater

attention should be paid to identifying consumer preferences for participating in health services decision-making.

A continued trend towards greater use of community-based service delivery models emphasizing integration, multi-service and interdisciplinary approaches is indicated in the literature. These models have, in general, been found to be more cost-effective than comparable services provided by single-service providers and institutional providers. This is particularly evident when comparing the community health centre organizational model with solo fee-for-service physician practice.

In order to achieve greater service equity, the use of population-based funding models with adjustments for level of health need is warranted. Implementing such an approach will require development of a valid proxy for measuring the health status of the population, and reliable mechanisms for gathering the data necessary to accurately track population health.

A clear definition of the service catchment area is essential to making decisions which consider health needs of the collective population. One important unanswered question is the determination of what constitutes an optimum catchment size.

2.4 Challenges in the Development of a Framework

The development of a policy and evaluation framework is impeded by several important features inherent in the delivery of community-based health services. These features present particular challenges to the identification and application of appropriate indicators for measuring the effectiveness of these services.

Broad Context

Community-based health services operate under a broad definition of health which emphasizes a positive rather than negative concept of well-being. Unfortunately, measurement of the positive aspects of health is not nearly as straightforward as measurements relating to aberrations from health.

The health system is only beginning to understand the complex associations between human health, genetic endowment, and factors of the social and physical environment. It is recognized that each individual's health potential is associated with a very complex set of internal and external influences. The simple and straightforward solutions for addressing traditional health threats may no longer be the optimal strategies for dealing with today's complex health challenges.

Community-based health services attempt to address the context for health as well as specific presenting health problems. Influencing the broader determinants of health and their impacts requires a strong alliance with other community organizations and government departments. Although highly desirable and necessary, this multi-faceted approach poses considerable difficulty in any attempt to attribute changes in health status solely to a particular community-based health service.

Limitations in Applying Literature Findings

Owing in large part to the issues associated with the broad context for community-based health services delivery, the body of knowledge about what are the most successful and appropriate strategies for the health system in addressing these complex issues is only just emerging. There is a dearth of valid studies and, for those studies which are available, considerable problems arise in generalizing the results. Therefore, many indicators for establishing policy or evaluating results of community-based health services can only be postulated at this time. When approaches are introduced without evidence of its effectiveness or generalizability, it is essential that associated intended outcomes are monitored and evaluated.

Long-Term Horizon of Prevention/Promotion Approaches

Utilizing a health promotion and disease prevention approach involves a commitment to achieving long term effectiveness. It is much harder to estimate the number of health problems that did *not* occur because of a particular intervention than to count the number of cases that did occur. Linking service delivery to health status outcomes becomes increasingly difficult with increasing time horizons. The evaluation of prevention and health promotion approaches is especially problematic in rapidly changing political and health reform environments.

Role of Value Judgements

As society faces difficult choices between competing service alternatives because of limited resources, incorporating the community's value judgements becomes increasingly important in making health service management decisions. The determination of what health services are "best" for a community and what type or level of service is appropriate cannot be made solely through the application of objective scientific information, even should such information be complete. Community-based health services providers need to distinguish and incorporate the complementary roles played by objective and subjective considerations in the decision-making process. A framework for establishing policy and evaluating community-based health services must incorporate both provider analysis of available health information as well as society's perceptions and value judgements about health issues and service preferences.

3 WHAT IS MEANT BY "COMMUNITY-BASED HEALTH SERVICES"?

The concept of *community-based health services* has evolved from a variety of perspectives in Canada over the past quarter century. These perspectives reflect the range of service delivery models evident across the country. Community health centres (CHCs), centres locaux des services communautaires (CLSCs), home care programs, primary medical care organizations, and public health agencies are some examples. Service providers working in various settings have developed their own understanding of and terminology around the concept defined in this document as *community-based health services (CBHSs)*. Other terms often used are *primary health care, primary care, primary health, community health,* and *community care.*

The concept remains a dynamic one. It continues to evolve as provinces and territories move towards greater devolution and integration of services and as technological advances offer more opportunity for the provision of services within a community context.It is unlikely, within the scope of a project such as this one, that any universally acceptable terminology can be achieved. However, in presenting a generic framework which may be used by various jurisdictions across the country, it is important that our use of terminology is clarified. A description of the term *community-based health services* and related terms follows. In addition, a glossary of additional terms used in this document is provided in Appendix A.

3.1 Definition

The definition of *Community-Based Health Services*, as used in this document, incorporates a comprehensive range of "non-institutionalized" health and related services. Most simply explained, it represents those services which are considered to be a part of the mandate of the health system but which are not traditional institutionally-based acute care, psychiatric and long-term care services. With one noted proviso, it is closely aligned with the concept of *Primary Health Care*, as defined by the World Health Organization (WHO):

> *"Primary Health Care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford . . . . It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process . . . Primary Health Care addresses the main health problems in the community, providing promotive, preventive, curative, rehabilitative [and supportive] services accordingly" (WHO,1978).*

It is important to note what primary health care is and what it is not.

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> only first contact medical or health care...

It is intended:

> to reach everybody, particularly those in greatest need;
> to reach to the home and family level, and not be limited to health facilities; to involve a continuing relationship with persons and families" (WHO, 1988, pp. 15-16).

Although there is significant overlap between primary health care and our concept of CBHSs, the two terms are not entirely synonymous. It may be argued that not all primary health care is necessarily community-based. For example, the vast majority of normal births still occur in institutions. Furthermore, with advances in technology, it has become increasingly possible to deliver secondary and even some tertiary level care in non-institutional settings. Thus, when it is technologically feasible and cost-effective to provide secondary and tertiary health services in community settings, these are also included under the concept of CBHSs.

Given such a broad definition of CBHSs, it is apparent that the concept involves a *system* of organizations, programs and services which, *together*, play a substantive role in each province and territory's health services delivery system. Many health service organizations or programs based in the community are oriented to specific sub-groups of the population defined by health concern, age category (e.g., elderly), gender (e.g., women's issues), socio-economic standing (e.g., disadvantaged) or by particular objectives (e.g., communicable disease control, environmental health protection). These are seen to be sub-sets of a broader view of the CBHSs concept - one which encompasses a comprehensive range of promotive, preventive, primary curative, rehabilitative and community supportive services.

Further elaboration of the concept of CBHSs is achieved by breaking down its component parts, as follows:

> **Community-Based** - From this study's site visit interview results, it is apparent that several perspectives contribute to an understanding of what makes a service community-*based*. These include (a) community ownership of CBHSs, and (b) the provision of services within the context of people's everyday lives (i.e., closer to where people live, work, go to school, undertake leisure activities and through culturally and linguistically appropriate approaches). *Community* may be defined in one of two ways - as a geographical territory or by an issue of "common unity". Examples of both kinds of definition are reflected in the types of CBHSs organizational models evident in Canada.

Health - The WHO definitions of health underly the concept of CBHSs:

> *"The extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs, and, on the other hand, to cope with the environment. Health is therefore seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capacities" (WHO, 1984); "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948).*

Services - The term *services* rather than *care* is utilized to incorporate a broader range of activity than the clinical functions generally associated with latter term.[2] An emphasis on health and on the determinants of health necessitates the use of promotive, protective and preventive strategies which are not necessarily delivered to individuals with specific care needs, but to the population at large. For example, most environmental health protection services are not delivered directly to those who are most likely to benefit from them. Rather, education and inspection services are provided to those whose practices impact the health of the public (e.g., restaurant operators, municipal planners). The term *care*, as it has been traditionally used within the health system, is incongruent with population-based interventions used by these and other health promotion and community development service providers.

3.2 Principles

The concept of CBHSs involves a number of characteristics. These characteristics have been compiled following review of published and unpublished documents which attempt to expand on the concept of CBHSs or primary health care. They are presented as principles which generally govern the operation of CBHSs. They also offer a basis for the identification of items which might be included in the design or evaluation of CBHSs.

2 The term care was utilized in Components One and Two reports. A decision to change this term was made based on Component Three focus group session feedback.

COMMUNITY-BASED HEALTH SERVICES PRINCIPLES

Universality	As a foundation of the health system, CBHSs are universally accessible to individuals, families and communities at a level affordable to the health system.
Appropriate Environment	CBHSs are delivered within the context of people's everyday life. Thus, to the extent feasible given available resources, services are: delivered as close as possible to where people live, work, go to school and/or undertake leisure activities; provided within each individual's family and community context; culturally appropriate; linguistically appropriate; and physically accessible.
Continuum	CBHSs encompass the full continuum of primary health services including health promotive, preventive, primary curative, rehabilitative and supportive services. When it is deemed that specialized secondary and tertiary health services are most appropriately delivered in an institutional setting, CBHSs, as the first level of contact within the health system, are the primary route of access to these institutional services.
Equity	While offering a core of CBHSs to all residents, providers also target services for individuals, families and communities demonstrating the greatest existing or potential health risk.
Health Focus	While providing a full continuum of primary health services, the emphasis of CBHSs is on maintaining the health of individuals, families and communities and on addressing the determinants of health through a socio-ecological approach (see glossary of terms).
Interdisciplinary	CBHSs are delivered by teams of individuals who share common goals, determined by individual and community needs, to which the achievement of each member of the team contributes, in a coordinated manner, in accordance with his/her competencies and skills and respecting the functions of others (Adapted from WHO, 1985 cited in Abelson and Hutchison, 1994, p. 40)
Intersectorial	Recognizing that the formal health system is only one of a number of factors that determine the health of individuals and populations, CBHSs providers work in partnership with other community organizations in the identification and resolution of health and related issues.
Population-Based	CBHSs are delivered to a specified geographical territory or sub-group of the population, thus involving a population-orientation to service planning and evaluation.
Responsiveness	CBHSs providers are responsive to the needs and concerns of the individuals, families and communities served and actively involve consumers and citizens in the governance, management and evaluation of services.

3.3 "Core" Community-Based Health Services

The types of services provided by CBHSs organizations may be defined from a number of perspectives. For example, CBHSs organizations may categorize their services according to the dimensions of health addressed, the issues addressed, the service strategies employed, or by the types of service providers involved, or as is most frequently observed, by a combination of the above.

Dimensions of Health and Well-being - CBHSs providers advocate a holistic concept of health which considers all aspects of an individual contributing to the realization of aspirations and satisfaction of needs. These dimensions are: physical, mental, social, and spiritual.

Health Issues - CBHSs may be organized around the issues which represent existing or potential challenges to the health of individuals, families and communities. These health challenges may be associated with: life stages (e.g., maternal and child health, healthy growth and development, adolescent health, adult health, seniors' health), and/or health issues of greatest concern to the community (e.g., alcohol and drug abuse, AIDS, violence, injuries, nutrition, smoking).

Service Strategies - The strategies that are employed by CBHSs providers to address health issues may be categorized under the following broad groupings:

> **Health Promotion** - *the process of enabling people to increase control over, and to improve, their health* (Ottawa Charter on Health Promotion, 1986). Types of health promotion strategies that may be used by CBHSs programs include advocacy, community development, education and healthy public policy development;
>
> **Prevention** - *activities designed to prevent the occurrence or progression of death, disease, disability or dysfunction*. Types of preventive strategies may include provision of preventive care services (e.g., immunization, estrogen replacement therapy), early disease detection (e.g., developmental screenings, cancer screenings), crisis intervention (e.g., suicide prevention hot-lines), early childhood intervention (e.g., parenting programs, developmental programs for high-risk children), health education and counselling (e.g., nutrition education, sexual health education), health status monitoring (e.g., communicable disease surveillance) and enforcement of legislated requirements designed to control disease (e.g., restaurant inspections to control food-borne illnesses);
>
> **Primary Curative Services** - *activities designed to address identified health issues or conditions*. These represent a range of assessment and treatment services to address acute or chronic conditions; emergency services which may safely be delivered in the community setting; and referral services to specialized institutions or providers;
>
> **Rehabilitation** - *services designed to improve or maintain the ability of individuals to function as independently as possible*. Types of rehabilitation activities include assessment, treatment, education, counselling and environmental adaptation. These activities may be offered in the following service areas: physical therapy, occupational therapy, speech-language pathology, audiology, respiratory therapy and recreational therapy;
>
> **Community Supports** - *the types of assistance required by individuals to maintain independence, prevent institutionalization, or cope with a condition which may be deteriorating*. Types of community supports which facilitate independence and coping

include the provision of home support services (e.g., meals-on-wheels, homemaker), access to assistive devices (e.g., wheelchairs, walkers, hearing aids), palliative care (including support of family members and access to spiritual support), respite care for informal care providers, and adaptive housing for individuals with disabilities.

These service strategies may be directed to individuals, groups of individuals, or populations (see Federal, Provincial and Territorial Advisory Committee on Population Health, 1994 for a discussion of population health strategies).

In addition to the above services, CBHSs are supported by a range of clinical and non-clinical services including laboratory, pharmacy, diagnostic imaging, administrative and information support services. Increasingly, alternative services such as native healing, massage therapy and acupuncture are incorporated under the CBHSs umbrella to complement the more traditional service mix.

Service Providers - The services listed above may be delivered by providers ranging from individuals administering self-care, volunteers and family members, to formal paid service providers. Many health service organizations have traditionally been organized along discipline lines - nursing, medicine, rehabilitation, pharmacy, etc..

In understanding CBHSs, it is important to recognize that service providers view clients as individuals who function within a family and community context. In many cases, the focus of the provider's attention is as much on this family and community context as it is on the person with the identified health need. For example, an elderly caregiver may need training in the proper way to lift the client. Without such training, the caregiver may develop back problems and become an additional client for the health system, and ultimately, institutionalization of the initial client may be required.

As mentioned at the outset of this section, the potential service configurations are many. There is no universal agreement as to the desired "core" CBHSs which should be available to Canadians. However, it is possible to suggest a listing of services which form the foundation of a comprehensive and holistic delivery model, based upon a review of those delivered across the various CBHSs sites visited as part of this study and on the WHO Alma-Ata declaration on Primary Health Care (1978). These services are listed in alphabetical order and do not suggest any order of importance:

Communicable disease control (to control the spread of disease)
Community supports
Dental health
Emergency (basic)
Environmental health (to ensure safe food and water supply, air quality, basic sanitation)
Health promotion, including community development
Healthy child development
Home care, including palliative care
Mental health (non-institutional)
Nutrition
Prenatal and obstetrical care
Prevention and treatment of common diseases and injuries
Rehabilitation

Sexual health/family planning

Psycho-social services (non-justice system issues)

At present, few Canadian jurisdictions provide the full range of services out of one organization or location.

Several considerations are important when contemplating the mix and organization of services that will most effectively meet the principles of CBHSs:

The types of clients served may be grouped into two main categories:

(a) individuals who are generally healthy but require promotive, preventive and episodic curative services to maintain their health, and

(b) higher needs (or higher risk) clients who require more specialized and/or ongoing CBHSs.

What constitutes an appropriate balance of resources allocated to these two groupings of clients is not known. This remains an important question for CBHSs providers attempting to offer a comprehensive range of routine services while, at the same time, proactively addressing the community's greatest health needs.

For both groupings of clients, but most critically for the second category (i.e., high risk clients), it is not sufficient to demonstrate the availability of the above range of services for consumers. It is of critical importance that the services be coordinated and integrated for individuals and their families. This coordination and continuity of care is facilitated by the organization of services by logical groupings of clients demonstrating similar needs (e.g., frail elderly).

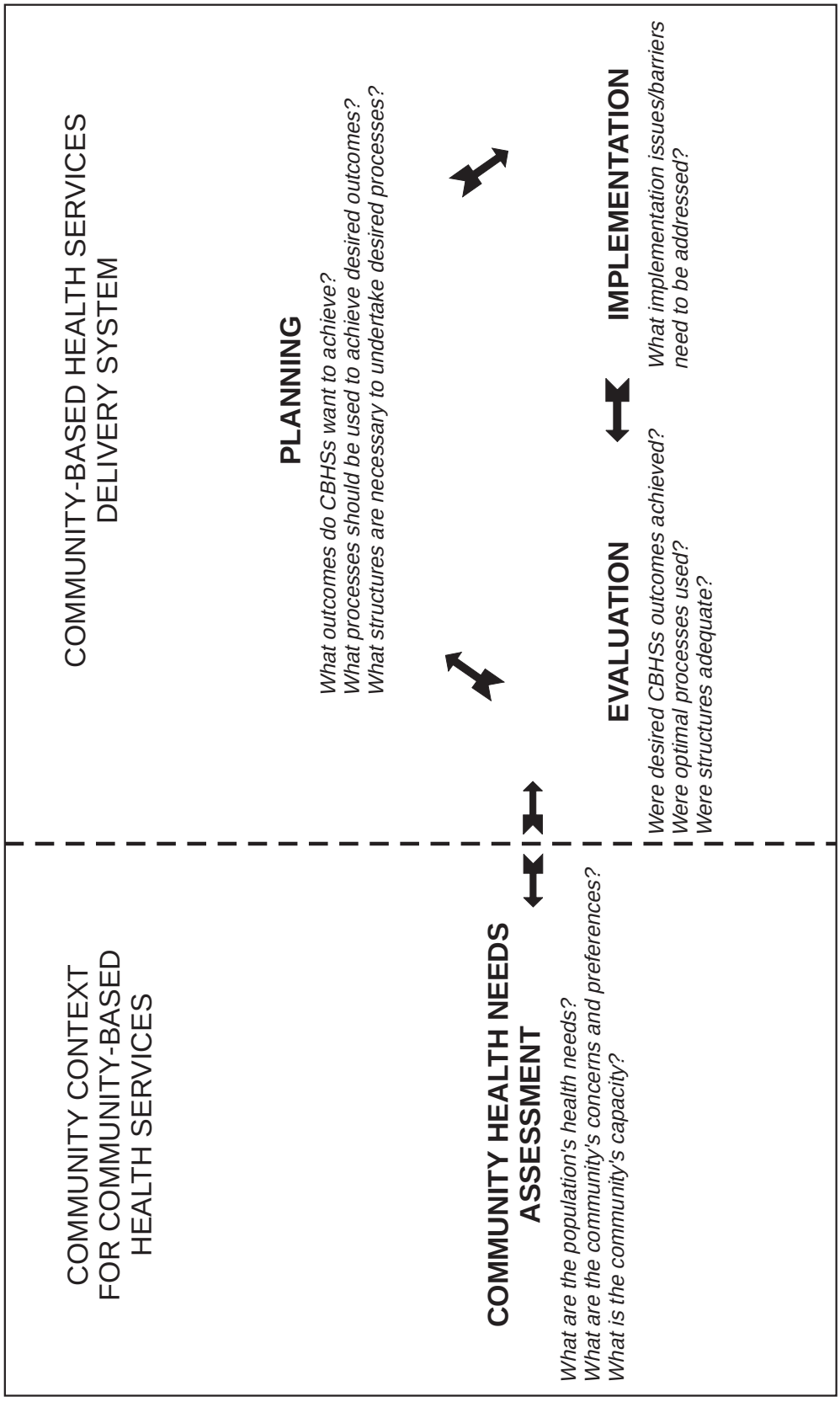
The community 's health profile will vary from jurisdiction to jurisdiction. For example, the types of health issues evident may be related to factors such as the overall socio-economic status of the community, the main industrial or economic base, or whether an urban versus rural population is served. Thus, the weighting given to each of the above core services will vary among CBHSs organizations. As well, additional services may be added when necessary to meet each community's identified health needs.

4 FRAMEWORK

Our framework for the planning and evaluation of CBHSs is based upon the four phases of an ongoing process of decision-making: assessment, planning, implementation, and evaluation. This process, including the fundamental questions to be addressed in each phase, is depicted in Figure 1. This same cycle may be applied at different levels of the health system, i.e., provincial/territorial, regional, organizational, program or service encounter levels. The main focus of this framework is on issues of concern at the provincial-territorial, regional or organizational levels. It does not address program planning and evaluation.

Due to the wide variations in the extent of devolution across Canadian jurisdictions, it is not possible to ascribe responsibility for the issues identified. It will be up to each jurisdiction to identify who has the primary responsibility for each of the stated elements (i.e., determining at what level the policy decision should be made or who should be addressing the evaluation question).

FIGURE 1. MANAGEMENT CYCLE



(Adapted from Saunders, L.D. & Wanke, M.I., 1995 & Edmonton Health Information Network, 1995)

Phase One: Community Health Needs Assessment - A comprehensive community needs assessment involves: a review and analysis of the population's health status and the factors influencing health, the community's perceptions of priority health issues and service preferences, and the current capacity of the community's resources to address identified community health issues. This latter factor includes a review of the availability and utilization of CBHSs and related community services as well as the innate characteristics of the community (i.e., age and stability of community, overall socio-economic status).

Phase Two: Planning - Once priority issues for attention are identified in the assessment phase, services are designed or re-designed to address these issues. In this phase, goals, objectives and action plans are set. This involves identifying desired service outcomes, determining appropriate processes for resolving priority issues, and identifying the necessary structures to support the chosen processes. It is in this phase that policy issues associated with various courses of action are analyzed. An additional important activity during this phase is the development of a plan for the evaluation of the selected outcomes, processes and structures.

Phase Three: Implementation - This phase involves the implementation of action plans to meet the goals and objectives established in the planning phase. Of particular concern is the timely identification of implementation barriers and the development and adoption of strategies to overcome these barriers. For future evaluation purposes, indicators identified during the planning phase are tracked throughout service implementation.

Phase Four: Evaluation - Once CBHSs have been implemented, they are evaluated before further refinement is made in an ongoing process of service improvement. This evaluation involves an analysis of the extent to which the selected plan worked, i.e., whether desired outcomes were achieved, optimal processes were employed, and structures were adequate for undertaking the selected processes.

To complete the cycle, an attempt is made to evaluate the contribution of CBHSs in positively impacting the broader community's health status. However, because the health system (of which CBHSs are a part) represents only one contributor to improvements in population health status, using the health determinant and health status measurements reviewed under the assessment process to evaluate the performance of the health system is problematic. The dotted line in Figure 1 represents the incomplete link between the planning, implementation and evaluation activities of CBHSs organizations and the broader context in which CBHSs operate and hope to impact. These population health indicators are more appropriately viewed as measures of the performance of society as a whole. In some cases, there may be a direct link between a CBHSs and a population health outcome (e.g., control of measles through an immunization program). In these instances, direct evaluation of the population health impact can be undertaken. A continuing joint challenge for the health system and other societal sectors is the identification of better ways of relating specific services to the population health status measures.

Both the planning and evaluation phases involve considerations of CBHSs outcomes, processes, and structures (adapted from Donabedian, 1966):

> **Outcomes** refer to the *consequences or impact of services*. The desired outcomes of CBHSs include effectiveness (e.g., health status improvement, consumer satisfaction), economic efficiency, equity and consumer empowerment.

Processes refer to the *activities or approaches employed to accomplish the desired outcomes*. These may be classified into management and service delivery processes. Some of the approaches which are important for CBHSs include interdisciplinary service delivery, intersectorial collaboration and client-centered care.

Structures refer to the various *resources and linkages required to deliver the services*. These include consideration of the type, mix and skill development of human resources; funding levels and mechanisms; legislative framework and policies; governance structures; and information support requirements.

The goals and measurement indicators established in the planning phase mirror the evaluation questions and indicators used in the evaluation phase. Figure 2 provides an example of how outcome, process and structure considerations are incorporated within the planning and evaluation phases. This document provides a template from which to select possible goals, evaluation questions and indicators for CBHSs (as per columns one and two). Individual jurisdictions will need to develop the corresponding objectives, action plans, specific evaluation questions and evaluation plans (as per columns three and four).

In the subsequent chapters of this document, each phase in the management cycle is presented. Due to the mandate of this project, the main focus of the document is on the planning and evaluation phases of this cycle.

FIGURE 2. OUTCOME, PROCESS AND STRUCTURE IN PLANNING AND EVALUATION PHASES

		GOALS	INDICATORS	OBJECTIVES	ACTION PLAN
PLANNING	**Outcome**	*Service Effectiveness*: e.g., CBHSs result in a reduction in health risk posed to individuals, families and the community	e.g., demonstrated improvement in preventive behaviour: - sexual health practices	e.g., By 19__, the proportion of 13-18 year old teens who report safe sexual practices will increase to ____ percent.	e.g., 1. Determine key stake-holders by ____. 2. Develop school program with school personnel by ____. 3. Implement program by ____.
	Process	*Service Delivery* e.g., CBHSs providers collaborate with other community organizations to ensure services are continuous and complementary	e.g., perception of other community organizations regarding presence and effectiveness of collaboration	e.g., By 19__, ____ percent of school principals will indicate they are satisfied with the level and quality of collaboration with CBHSs providers.	e.g., 1. Assign key CBHSs contact for each school by ____. 2. Establish mechaniswm for ongoing collaboration by ____.
	Structure	*Provider Skills* e.g., CBHSs providers possess the skills necessary for their assigned functions.	e.g., proportion of informal providers adequately trained	e.g., By 19__, ____ percent of teachers providing the sexual health program will have attended a training course.	e.g., 1. Develop training course for teachers by ____. 2. Implement course by ____.
		EVALUATION QUESTIONS	**INDICATORS**	**SPECIFIC QUESTIONS**	**EVALUATION PLAN**
EVALUATION	**Outcome**	*Service Effectiveness* e.g., Have CBHSs resulted in a reduction in risk to individuals, families and communities?	e.g., demonstrated improvement in preventive behaviour: - sexual health practices	e.g., What proportion of 13-18 year old teens report practicing safe sexual health practices?	e.g., 1. Design survey by ____. 2. Implement survey by ____. 3. Analyze & report results by ____.
	Process	*Service Delivery* e.g., Are CBHSs provided in collaboration with other community organizations?	e.g., perception of other community organizations regarding level and quality of collaboration	e.g., What percent of school principals indicate satisfaction with level and quality of collaboration?	e.g., 1. Design survey by ____. 2. Implement survey by ____. 3. Analyze & report results by ____.
	Structure	*Provider Skills* e.g., Do informal providers possess the skills necessary for their assigned functions?	e.g., proportion of informal providers adequately trained	e.g., What percent of teachers providing sexual health programs have attended the training course?	e.g., 1. Document teacher attendance at courses from ____ to ____. 2. Analyze & report results by ____.

5 COMMUNITY HEALTH NEEDS ASSESSMENT

Before designing or re-designing the CBHSs delivery system, it is important to gain an understanding of the community's greatest health issues. This will enable decision-makers to set priorities for proactive attention. The three questions which are relevant at this stage are presented below, along with the key information dimensions necessary for addressing each question. A listing of indicators associated with these information dimensions and potential data sources is presented in Appendix B.

5.1 What are the Population's Health Needs?

Three dimensions of information are important when attempting to determine a defined population's health needs: demographic composition of the community, health status and health determinants. A useful classification scheme and terminology for reviewing population health needs follows (adopted from Lightfoot, 1995):

Demographic data are those which describe the *structure and growth dynamics of the population of interest*. They influence both the health status of the entire community and the nature and extent of health problems experienced by its members. In addition, demographic data enable study of the variation in health status across groupings and provide the denominators for the determination of rates (e.g., death rates).

Health status is defined broadly and includes physical, mental, social and spiritual dimensions (see World Health Organization, 1994). It is important to incorporate, as much as possible, both positive and negative aspects of health status:

> **Health potential** refers to measures involving fitness, functioning, coping, resilience, ability to withstand challenge, and resourcefulness;
>
> **Aberrations from health** refer to measures of mortality, morbidity, disability, and inability to function in a role.

Health determinants refer to *measures of human biology; physical, social, cultural and economic environments (including the health service delivery system); behaviour and lifestyle; and public policy*. For the purposes of classification, determinants can be categorized according to those which are individually and those which are societally based. However, it is recognized that many individual behaviours are not a matter of pure choice, but rather are related to societal factors.

5.2 What are the Community's Concerns and Preferences?

Two dimensions of information are considered important: the community's health concerns and service preferences. It is noted that these reflect subjective perceptions of need.

> **Health Concerns** refer to the perceptions of the public about their own health needs and the collective health needs of the community in which they live.
>
> **Service Preferences** refer to the community's perceptions of the types and levels of services which most appropriately address their expressed concerns.

5.3 What is the Community's Capacity?

A review of the community's capacity to address the identified health issues provides information important for the subsequent planning phase. Included in this consideration are the following information dimensions: human, capital, technical and financial resources; and service availability and utilization. In addition to CBHSs, the availability of other related community resources and services is assessed as the identified issues are likely to fall under the responsibility or interest of numerous agencies and departments.

Human, Capital, Technical and Financial Resources refers to the availability of service providers, capital, technical supports and funding that may be channelled into the resolution of the identified issues.

Service Availability and Utilization refers to the type and level of CBHSs and related services made available to the community as well as the actual consumption patterns for these services. Restrictions in access to, duplication of, and gaps in services are identified. Service utilization patterns, when analyzed according to socio-economic status, race, gender and other demographic variables, provide useful information about the extent to which services are being used by intended or unintended target groups.

In addition to the above, some demographic data can be used to assess community capacity. For example, in/out migration and the age and structure of the community provide indications of the extent to which the community is able to mobilize itself to address identified issues. Geographical considerations such as whether the community is urban, rural or isolated may be associated with particular behaviour patterns in accessing health and related services.

Discussion

The CBHSs principle of responsiveness requires that the community be seen as a partner in the identification of service priorities. The needs assessment process involves two-way communication between service providers (who possess specialized knowledge and can contribute objective data analysis and integration) and the public (whose perspectives and value judgements are critical in the selection of competing options).

However, a caution is raised. It is important at the outset to gain a solid understanding of the community's level of knowledge about health issues. In instances where knowledge gaps exist or perceptions of health risk are not accurate, it is the role of CBHSs providers to give the public accurate information. When community members are informed about the population's health status, existing services and the advantages and disadvantages of alternative courses of action, they are more likely to be able to offer solid direction regarding service priorities and preferences.

Because the factors considered when undertaking a community health needs assessment are broad, the assessment is generally not done in isolation by the CBHSs system. Rather, it involves a community endeavour which includes members of other community organizations in addition to personnel from within the CBHSs organization. Furthermore, community health assessment information forms part of a broader database of ongoing information useful for planners and evaluators working in institutional health, non-government organizations and in other government departments at the municipal and provincial levels.

6 PLANNING

Once the community's health needs, concerns and capacities have been assessed, CBHSs decision-makers will design or re-design programs and services to address the identified needs. This involves the determination of goals or results to be achieved which, in turn, guide the work of CBHSs providers.

In sections 6.1 through 6.3, a number of outcome, process and structure goals are proposed. Due to the focus of this project, health human resources and organizational issues identified in the literature reviews and site visits are emphasized. When taken together, these goals summarize what are deemed to be important and desirable elements of a sound CBHSs system. It will be up to individual jurisdictions to (a) confirm the goals appropriate for their particular circumstances and (b) to develop specific objectives and action plans, with quantifiable targets and timelines.

In addition to the goal statements, summary findings of the literature searches and site visits are presented as they pertain to policy issues important in the planning cycle. For more detailed information about any of the planning or policy issues identified, the reader is directed to the companion documents.

6.1 What Outcomes are CBHSs Attempting to Achieve?

Five outcomes (four primary and one intermediate) that CBHSs attempt to achieve are listed and discussed below. They are based upon the outcomes most frequently associated with CBHSs in the literature. The five outcomes are:

Service effectiveness;
Economic efficiency;
Equity;
Community/consumer empowerment; and
Quality of worklife (intermediate outcome).

With the exception of quality of worklife, the outcomes are limited to those which can be expressed as *ends* in and of themselves rather than as *means* to these ends. They are considered as ends because it is possible to link them to underlying societal values that may be seen to be driving them. The first four outcomes are seen to be associated with the underlying values of "quality", "value-for-money", "fairness", and "sense of control" respectively (as expressed in lay rather than service provider terms). The intermediate outcome, quality of worklife, is included as an outcome due to the study's focus on health human resources management.

It is important to differentiate between health status/health determinant measurements reviewed during the assessment phase and those used in the planning and evaluation phases. *The indicators associated with the planning phase are directly related to the provision of CBHSs. They pertain specifically to the recipients of service rather than to the population at large.*

COMMUNITY-BASED HEALTH SERVICES OUTCOME GOALS

Service Effectiveness:

CBHSs result in an improvement in or maintenance of the **health status** of individuals or groups of individuals receiving services

CBHSs result in a reduction in (or maintenance at existing levels of) **health risk** posed to individuals, families and the community

CBHSs result in an improvement in or maintenance of the **capacity** of individuals, families and communities to withstand challenges to health

CBHSs are **relevant** to the changing circumstances of individuals, families and communities

Consumers are **satisfied** with CBHSs

Economic Efficiency:

CBHSs rationalize costs to the health system while achieving satisfactory health status and consumer satisfaction outcomes

Within the CBHSs system, costs are minimized by utilizing the least costly service and provider alternatives for achieving effective results

CBHSs prevent unnecessary institutionalization

Equity:

CBHSs are universally available to all members of the community

The opportunity for access to CBHSs by individuals or families with special needs is based upon their level of health need or health risk

Consumer/Community Empowerment:

The community perceives control and ownership of CBHSs

Consumers of CBHSs have control over the decisions about their personal health services

Consumers possess the necessary knowledge for making appropriate decisions about their own health services and the management of CBHSs

Quality of Worklife (Intermediate Goal):

Informal and formal service providers experience a positive work environment and perceive job satisfaction

Discussion:

Outcome 1: Service Effectiveness

Service Effectiveness refers to *the ability of CBHSs to produce positive results with targeted individuals or sub-groups of the population through appropriate and acceptable service processes*. Goals under this outcome include five key aspects: health status, health risk, health capacity, relevancy and consumer satisfaction.

Community-based health service providers are oriented to look beyond ill-health at ways of maintaining or improving quality of life and wellness. While acknowledging the usefulness of traditional health status outcome measurements for some CBHSs (e.g. reductions in death, disease and disability), the growing body of knowledge about what contributes to health and ill-health necessitates the inclusion of outcome measures for those services attempting to influence the underlying determinants of health. In addition, measures which address the objectives of improved functioning and coping are important. For example, programs such as home care, mental health, rehabilitation and social services often strive to maintain or enhance the capacity of individuals to live as independently as possible or cope with challenges to their health associated with ongoing or deteriorating health conditions, and poor social or physical environmental conditions. Measures to capture these types of outcomes are generally not well developed. Goals involving risk reduction and increased capacity/coping are proposed in an effort to acknowledge these important CBHSs outcomes. Because people and communities are dynamic entities, it is important that CBHSs address the ever changing needs of individuals, families and communities. To capture this aspect of service effectiveness, relevancy has been included as a goal to ensure that the "right services" are provided at the "right time". An example of this consideration is a CBHSs organization's timely response to the physical and psycho-social needs of residents following incidents such as flooding or episodes of violence.

The CBHSs principle of intersectorial collaboration recognizes the limited influence of the health system in achieving real gains in the community's health status unless the efforts of health service providers are combined with the efforts of other community organizations and government departments. It is likely that some CBHSs objectives developed under the above goals will be closely aligned with the objectives of related community agencies, with each community agency defining its intended contribution to the overall goal.

Outcome 2: Economic Efficiency

Economic Efficiency refers to *the extent to which costs are minimized while achieving positive health outcomes*.

Measurement of the achievement of economic efficiency goals is primarily achieved through economic evaluation. Drummond, Stoddart and Torrance (1987) define economic evaluation as *the comparative analysis of alternative courses of action in terms of both their costs and consequences*. They discuss four types of economic analysis: cost-minimization, cost-effectiveness, cost-benefit, and cost-utility.

However, the ability to undertake formal economic evaluations is likely to be beyond the capacities and resources of individual CBHSs organizations. Such evaluations involve extensive research initiatives. However, these organizations can ensure that they are using economically efficient

service processes which have been identified through formal evaluations (and available in the literature) and that their service costs are in line with other comparable organizations (e.g., CBHSs organizations of comparable size and type of population in other jurisdictions).

One of the main ways of achieving health system efficiencies is the prevention of unnecessary institutionalization. This is achieved through the emphasis on dealing with issues before they become major health concerns and by providing support to individuals and families with health problems so that they may remain in their own homes and communities. Not only is this goal associated with economic efficiency; it is also closely related to the outcomes of effectiveness (i.e., consumer satisfaction) and consumer empowerment.

Outcome 3: Equity

Health and Welfare Canada (1993) defines ***equity*** as *fairness or justice in distributing health resources or power within the health system, or fairness and justice in accessing health services*. ***Equitable access*** refers to *the extent to which individuals and groups of individuals are able to receive CBHSs according to their level of health need or risk.*

The principles of need and justice as described by Beauchamp and Childress (1994) suggest that, while individuals of equal need should be treated equally in regard to the satisfaction of their needs, it is considered just to provide different levels of access or amount of service to people of different levels of need. While ensuring universal access to all residents, CBHSs attempt to achieve equity by targeting those individuals and groups of individuals with the greatest health needs. Through such a proactive approach, demonstrable improvements in the status of the population as a whole may be achieved.

Outcome 4: Community/Consumer Empowerment

Community/Consumer Empowerment refers to *the extent to which the community is involved in decisions about CBHSs delivery and individual consumers have control over the decisions affecting their health.*

The term empowerment represents the control perceived by consumers and the community over the decisions which affect their health. The role of the health system in contributing to the achievement of this outcome is to enable individuals, families and communities to gain knowledge and skills required to increase control over their health.

The goals listed under this outcome distinguish between two roles of community members with respect to CBHSs provision -their collective role and involvement as taxpaying citizens and their role as individual recipients of services. Policy issues relating to this outcome objective involve questions such as:

> What level and type of involvement does the community desire in the decision-making process?
>
> How is the CBHSs organization accountable to the community?
>
> What is the current level of awareness of community members about their individual and collective health status, existing services, service options, and their possible involvement in the decision-making process?

The literature reviews undertaken for this study suggest that these issues are complex. No clear answer exists to the question of what is the best means of ensuring accountability and enhancing community control of community-based health delivery models. It is suggested that greater attention should be paid to identifying consumer preferences for participating in decision-making about the health services delivery system. Studies included in this literature review did indicate, however, that consumers have an important role to play in decisions that involve value choices between competing options for their care.

Because the capacity to be involved in a meaningful way in decision-making is dependent on possessing sufficient knowledge to make sound decisions, a goal of knowledge attainment has been included.

Intermediate Outcome: Quality of Worklife

Quality of Worklife refers to the extent to which a positive work environment and job satisfaction for health services providers is achieved.

The quality of worklife is not an ultimate outcome of CBHSs. While the other outcomes are consumer-oriented, this outcome is provider-oriented. However, because provider satisfaction with the work environment is likely to be an important contributing factor to the achievement of the other outcomes and because an emphasis of this study is on health human resources, it is included as an intermediate outcome.

In this study's literature review, numerous studies found that practitioners working in home care and community health areas are satisfied with certain aspects of their work. They regard autonomy, flexibility, freedom to manage work and direct contacts with clients as the most rewarding aspects of their jobs.

6.2 What Processes Should CBHSs Employ to Achieve Desired Outcomes?

Processes are defined as the *activities or approaches employed by CBHSs to achieve desired outcomes.* They fall under two categories: management and service delivery processes.

In this section, the focus is on what might be considered the most important goals in CBHSs management and service delivery. They represent the issues thought to be of relevance and interest to the decision-makers responsible for the overall management of the services. Many previous Canadian and international initiatives provide guidelines for the management or delivery of CBHSs (e.g., Australian Community Health Association, 1993; Canadian Council of Health Services Accreditation, 1995). These sources provide detailed information for managers and clinicians working within CBHSs and are seen to complement this work.

COMMUNITY-BASED HEALTH SERVICES PROCESS GOALS

Management:

CBHSs are effectively, efficiently and strategically managed

CBHSs demonstrate sound financial management

Service Delivery:

The CBHSs delivery system encompasses a comprehensive range of preventive, promotive, primary curative, rehabilitative and supportive services

CBHSs *provide continuity of care to individuals and families*

CBHSs are coordinated across interdisciplinary service providers

CBHSs providers collaborate with other community organizations to ensure services are continuous and complimentary

CBHSs are client-centred

CBHSs intervention strategies/options offered to clients are based upon best available evidence

Discussion:

Management Processes

Management Processes refer to *the planning, organization, implementation, monitoring, and evaluation of CBHSs.* Operating in an economic environment where accountability is a growing concern, CBHSs organizations are increasingly called upon to demonstrate sound management of human and financial resources.

Results of this study's literature reviews and site visits highlighted the critical importance of strong and visionary leadership in achieving desired CBHSs outcomes. A corporate culture that emphasizes creativity, teamwork, freedom to manage work, flexibility, mutual respect and open communication is perceived not only to result in improved quality of worklife, but represents the "only way to do business in community health". The breadth and complexity of issues addressed and the highly consumer-oriented nature of service delivery necessitate a flexible work environment.

A strategic management approach is considered important in attempting to achieve the outcomes of equity and service effectiveness. This approach involves the use of a proactive management framework in which community needs are identified, goals and objectives are set, plans are effectively implemented and services are evaluated. Application of such a framework should contribute to ensuring that services are directed to those individuals and issues representing the greatest health needs in the community.

Service Delivery Processes

Service Delivery Processes refer to the *activities and approaches used by service providers to address the health needs of individuals, families and the community.*

The literature reviews and site visit interviews emphasized particular service delivery approaches found to be important for the achievement of CBHSs outcomes. Consistent with CBHSs principles presented earlier, these include an interdisciplinary and intersectorial service approach, continuity of care, consumer rather than provider oriented service delivery and evidence-based practice. In addition, the definition of CBHSs employed in this document incorporates a comprehensive range of services which include promotive, preventive, primary curative, rehabilitative and supportive strategies.

The World Health Organization defines the primary health care team as a *group of persons who share a common health goal and common objectives determined by community needs, to which the achievement of each member of the team contributes, in a coordinated manner, in accordance with his/her competence and skills and respecting the functions of others* (WHO, 1985 cited in Abelson and Hutchison, 1994, p. 40).

There is considerable empirical evidence that the interdisciplinary team approach is workable and effective in providing quality of care in community settings. The literature reviewed suggested that integrated, interdisciplinary models are less costly and more cost-effective than comparable services provided by single-service providers and institutional providers. This is particularly evident when comparing the community health centre organizational model with solo fee-for-service physician practice. However, the problem with the body of research on this issue is a rather ill-defined concept of "interdisciplinary team". It is not clear what constitutes a team and how a team in a community setting differs from a team in an operating room or a dentist's office. It is also not clear what actually contributes to making a team approach work.

Managers interviewed during the site visit process suggested that, although desirable, internal integration is not easily achieved. It takes time to develop common values and to build and understand the same language. Internal integration is reported to be facilitated by regular contact, program rather than functional organizational structures, joint problem-solving and the participation of all providers in staff meetings.

In addressing the issue of service coordination with community organizations providing complementary services, site visit interviewees advocated strongly for alliances with *natural* community partners, where common issues and functions are evident. Integration of health and social services, public health, mental health, home care and primary medical care within the community-based system was thought to be important whereas integration of CBHSs with the institutional sector of the health system was generally seen as detrimental. The greatest concern expressed about the latter was the potential for being absorbed by and forced into an "institutional" paradigm, thereby losing the health promotion, holistic and flexible approaches necessary for addressing health issues at their social and environmental roots. Nevertheless, close liaison and efficient referral processes between the community and institutional sectors were advocated.

Site visit interviewees defined client-centered service delivery in a number of ways: having services driven by client needs rather than other considerations (such as reduced length of stay), ensuring that patient choice/control is built into the service delivery process, and continuing to follow individuals served (in contrast to the single encounter approach generally used in hospitals).

The importance of evidence-based practice in ensuring cost-effective service delivery is increasingly advocated for all providers within the health system. One major initiative of particular relevance for CBHSs physicians and nurse-practitioners is the *Canadian Guide to Clinical Preventive Health Care* (Canadian Task Force on the Periodic Health Examination, 1994). Requiring the use of such practice guidelines in the day-to-day operation of CBHSs is thought to be a critical service delivery goal.

6.3 What Structures Should be Established for CBHSs?

Structures necessary for the implementation of effective and efficient CBHSs may fall under the responsibilities of various levels of the health system. For example, in order to enable the optimal use of complementary providers such as nurse practitioners and midwives, regulatory mechanisms must be in place which allow their employment and effective utilization. Such regulatory mechanisms are primarily provincial or territorial responsibilities. On the other hand, the actual employment of these alternative providers is the responsibility of individual CBHSs organizations.

The results of our literature review and site visit findings are summarized briefly. These findings are offered as a guide to assist CBHSs decision-makers in resolving health human resource and organizational policy issues.

COMMUNITY-BASED HEALTH SERVICES STRUCTURAL GOALS

Service Catchment:

CBHSs organizations serve an identifiable community, defined either by geographic territory or common need

CBHSs are readily accessible to the population served and sub-groups targeted

Health Human Resources:

CBHSs organizations utilize and support the most cost-effective service providers

Provider Skills:

CBHSs providers possess the skills necessary for their assigned functions

Occupational Regulation:

The legislation under which CBHSs providers operate enables cost-effective human resources management

Funding:

Funding mechanisms for CBHSs organizations facilitate cost-effective and creative use of available health services dollars

Funding mechanisms for CBHSs providers facilitate the most cost-effective and creative use of available dollars

Governance:

The governance structure ensures adequate representation and involvement by the community served in the formation, implementation and evaluation of CBHSs policy

The mandate of CBHSs governance boards, as expressed in provincial or territorial legislation, is clear

CBHSs Board members understand their legal mandate and possess the necessary skills to effectively govern the organization

Organizational Structure:

CBHSs are structured to facilitate cost-effective and consumer-oriented service delivery approaches

Information Systems:

Information systems which facilitate the planning, delivery, monitoring and evaluation of CBHSs are present and utilized

Discussion:

Service Catchment

Service catchment involves the definition of the population or jurisdiction being served, including the parameters for determining service accessibility.

Policy makers are faced with a number of key questions:

> How sh ould the "community" be defined?
>
> How should boundaries be determined?
>
> What is an optimal catchment size to maximize efficiency and community responsiveness?
>
> What are the most appropriate mechanisms to ensure accessibility for the defined community?

Our literature review and site visit results suggested that a community may be defined either in terms of geography or identified need. This is seen to be a critical requirement for the planning and allocation of resources based upon a population health approach and for the introduction of capitation payment systems.

Site visit interviewees advocated that CBHSs geographical territories should be defined by (a) natural boundaries (rivers, main streets, etc.) which determine the natural flow of individuals for service, and (b) the community's own sense of belonging to and association with an area. Having CBHSs territorial boundaries be coterminous with municipal boundaries was seen to facilitate linkages with politicians and municipal planners.

Very little applicable information on optimal size of jurisdiction is available in the literature. Site visit interviewees provided little guidance on this issue. Suggested optimal population size ranged between 20,000 -150,000 and reflected the managers' particular experiences with and perspectives of CBHSs. It is noteworthy that some sites visited demonstrated population bases (or registered CBHSs membership) of less than 10,000 community members. Urban and rural differences were also evident.

Most interviewees supported the delivery of a broad range of services through small jurisdictions in order to maintain a meaningful sense of "community". A need to balance critical mass with a natural "fit" or feel of community was identified as was a strong resistance to the "institutionalization" of CBHSs through large bureaucratic structures.

The potential of using a multi-level approach was presented as being potentially viable. In this model, the provincial/territorial governments are responsible for setting goals and standards, defining core services, and funding regional authorities. The regional authorities are responsible for identifying needs and service priorities, funding smaller service organizations or centres, and for coordinating and evaluating the delivery system. The smaller centres are responsible for the creative and flexible provision of services under the parameters established at the other two levels.

Access to CBHSs may be considered along a number of dimensions: physical, cultural, linguistic, financial, and the extent to which the types and levels of services offered are consistent with the types and levels of need demonstrated. Within the CBHSs context, the issue of accessibility is of paramount importance in the achievement of the outcome of equity as well as in influencing the population's health status through targeting of services to those of greatest need. Reaching those

individuals with the greatest health needs is often difficult due to cultural, linguistic, social, and sometimes physical barriers which need to be addressed by CBHSs providers. These access issues may vary considerably in different parts of the country and across rural and urban jurisdictions.

Health Human Resources

Health Human Resources refers to the *range of health services providers that could be relied upon to improve the health outcomes of individuals and communities.*

A broader point of view is slowly emerging in the health human resources discourse. The World Health Organization (1990) has stated: *"The term 'human resources for health' encompasses all those who contribute to the objectives of the health system, whether or not they have formal health-related training or work in the organized health sector"* (p. 45).

In the context of community-based health services, the health human resources continuum may be seen as comprising three main categories: self-care, informal, and formal service providers. The difference between informal and formal providers is not necessarily based on training or competency. The most important differentiating factor is gainful employment status. Whereas formal providers are remunerated for their work, informal providers provide their services on a voluntary basis. Another factor is legal sanction. While many health occupations are legally recognized through licensure, certification or registration, informal providers receive no such recognition. Within the formal provider category, providers range from highly qualified specialists to workers who have received minimal on-the-job training. The main policy issue for decision makers is the determination of what is the most cost-effective mix of self-care, informal and formal service provider. This involves consideration of appropriate provider roles and role substitution, expansion and diversification. Of particular interest to CBHSs organizations is the appropriate incorporation of self-care strategies, informal providers, alternative formal providers and multi-skilled workers into the service delivery model.

Self-care and informal caregiving are widespread phenomena. As medical technologies become more sophisticated and as health care consumers become better informed, individuals can now perform many health care tasks that were at one time the exclusive responsibilities of formal providers in institutional settings. In some of the studies reviewed, self-care has been shown to be effective in response to a variety of health problems (e.g., Ondrejka, 1983; Wiernikowski & Dawson, 1991; Wilson et al., 1993). Other studies have shown that in certain circumstances, when given appropriate instructions and supervision, informal providers can provide counselling, health education and promotion, rehabilitation, and long-term care as effectively as formal providers (e.g., Casey, 1984; Wertz et al., 1986). Since self-care and informal service provision are, by definition, free (at least from the perspective of the health system), they are cost effective as long as the care does not aggravate or prolong the health problem of the service recipient.

An important policy consideration is the kind and extent of official (e.g., governmental, business, organizational) support that is needed to encourage or sustain informal care. The provision of care often results in physical, emotional, social and financial strain for the informal provider, particularly if care is provided for a protracted period of time or if the recipient of care is severely handicapped or cognitively impaired. The failure to provide adequate support could result in the discontinuation of caregiving by informal providers or the acceptance of institutionalization of their dependent (Jones and Salvage, 1992).

CBHSs must ensure sensitivity to the different values and attitudes evident in today's heterogeneous society. The use of indigenous health workers has been shown to be fairly successful in overcoming some service access problems facing ethnic, linguistic and cultural minorities and residents of remote and isolated communities. Generally speaking, indigenous health services workers are informal or formal providers who are given limited training and are used to deliver health services to their peers or within their own communities. Many different titles have been used to describe these providers: neighbourhood outreach worker, peer health worker, indigenous counsellor, village health worker, community health aide, and community health representative. Varying from situation to situation and from program to program, their roles include advocacy, community empowerment, outreach, health promotion, disease prevention and direct care provision (Pew Health Professions Commission, 1994).

There is ample and strong evidence to support the use of alternative providers, such as nurse practitioners and midwives in primary health care (e.g., Brown & Grimes, 1993; Giles et al., 1992; Office of Technology Assessment, 1986; Record et al., 1980; Reid & Morris, 1979). It has been shown over and over again in many jurisdictions that the care provided by these practitioners, working in collaboration with physicians, is safe, of high quality and cost-effective. Similarly, dental nurses or therapists have successfully substituted for dentists in the provision of some dental services (e.g., Abramowitz & Berg, 1973). There is also evidence that role substitution can partly overcome the effects of physician shortages in underserviced areas, resulting in a somewhat more equitable distribution of services (Chambers et al, 1977; Voltmann, 1975).

Role diversification in the form of multi-skilling is gaining in popularity and the demand for practitioners who are competent in more than one discipline is growing. It appears that cost saving potential is one of the major reasons for using multiskilled workers. To date, however, there is little published evidence showing that multiskilled workers are more cost effective than conventional providers, particularly in community settings. Also, systematic and vigorous assessment of the quality of care provided by multiskilled practitioners is lacking.

Each CBHSs jurisdiction will need to select the most appropriate mix of health human resources based upon consideration of the available evidence regarding the relative cost-effectiveness of alternative providers, the range of services required to address the particular needs of the community, and the availability of providers.

Provider Skills

Provider Skills involves the *initial acquisition and continuing development of health human resources.*

The two most relevant policy issues with respect to provider skills are the determination of what types of skills are important for CBHSs delivery and the best methods for ensuring such skill acquisition.

The formation and continuing development of health human resources depend on knowledge, skill and competency acquisition by those engaging in the delivery of health services. In the health workforce literature, attention focuses primarily on the initial training and continuing education of formal service providers. As has been pointed out earlier, however, the health workforce comprises more than formal providers; self-care and informal providers are also important in CBHSs delivery.

Self-care training programs have been found to be effective for clients with particular conditions such as arthritis, asthma, diabetes, upper respiratory tract infection, and other chronic illnesses (Glasgow et al., 1992; Goeppinger, 1989; Jenkinson, 1988; Mazzuca, 1982; Roberts, 1983). There is also some indication that education on self-management may result in decreased utilization of ambulatory care services (Vickery et al., 1983). However, the research effort in the area of patient education is very diffused. It ranges from changing attitudes to altering behaviours, from coaching healthy young children to instructing sick older adults, from distributing promotional pamphlets to using conventional classroom approaches. The effects achieved depend on the training model or technique used, the content of the training and who is being trained.

If informal providers are considered part of the health human resources continuum, then they must be given the opportunity to learn how to provide services or to enhance their caring capability. Many studies and demonstration projects have shown that training can motivate individuals to become informal providers or can help informal providers improve their quality of care, or more appropriately utilize medical care services (Casey et al., 1984; Nicoletti & Flater, 1975; Seltzer et al., 1992). Because of the differences in objectives, the wide range of training approaches used and the diversity of providers, it is understandably difficult to produce a systematic and consistent body of research evidence on this topic.

For the most part, formal providers are trained to work in institutions. As more health services shift to community settings, however, there is a need to give formal providers a broader understanding of health care issues, to familiarize them with community health service provision, and to prepare them to work in the community sector. In particular, our literature review suggested the need to incorporate the following content areas into formal training programs for health services providers: a broad understanding of health and its determinants, familiarity with CBHSs delivery, team approaches, and a focus on promotion/prevention and early intervention.

Recommended changes for re-orienting formal providers to work in community-based settings include redesigning educational programs or curricula, moving classrooms and practicum sites from institutional to community settings, providing opportunities to learn in a multi-disciplinary environment and helping providers cope with job transfers from institutions to community agencies.

The results of our site visit interviews suggested that the desirable qualities of CBHSs workers are not necessarily those learned in a classroom, but reflect certain attitudes, philosophies and personal characteristics. These include a holistic or broad perspective, an understanding of the workings of a community, flexibility, self-reliance, common sense and intuition, proactivity, strong interpersonal skills, problem-solving capabilities, and respect for others. These were perceived to be as important as, if not more important than, the technical skills required of the service providers. Several commented on the difficulties associated with transferring highly trained professionals from the institutional to the community setting, given these required qualities.

An initial orientation to the CBHSs organization, its philosophy, mission and approach to service delivery is used in many of the sites visited. In cases where it is hard to recruit qualified individuals, service providers may be hired and then systematically trained through self learning modules and courses or through formal programs with some assistance by the organization.

Occupational Regulation

Occupational regulation refers to *legislation which establishes who can do what, determines entry-into-practice conditions, sets conditions under which practitioners must perform their functions, and specifies who can use what kind of title.*

A key policy issue for each province and territory is the determination of what is the most appropriate form of occupational regulation. As the responsibility for the establishment and ongoing review and update of legislation falls under the mandate of the provincial and territorial governments, the presence of appropriate occupational regulation is beyond the direct control of CBHSs organizations.

The conventional health human resources literature pays limited attention to occupational regulation of the health workforce. This is surprising because occupational regulation can have a major impact, directly or indirectly, on the supply and distribution of providers, cost, availability and quality of service and how occupational groups relate to one another.

Occupational regulation seldom works in isolation, particularly in health care which is one of the most regulated sectors of the economy. While these measures are often justified by the need to protect the health and safety of the public, the negative consequences of inappropriate or excessive regulation are described in the literature (Economic Council of Canada, 1981; Gaumer, 1984; Gross, 1984). These include occupational monopoly, barriers to entry and mobility, rigidity in the occupational structure, inefficient use of human resources, higher service costs, personnel shortages, lack of accountability and stifling of innovation.

Although very little research on the statutory regulation of occupations is directly related to community-based health services, the implications of occupational regulation must not be overlooked. If one of the hallmarks of CBHSs is a more flexible use of health human resources, then related research suggests that this may be difficult unless there are major changes in the occupational regulatory system. A number of studies have found that rigid regulation inhibits the use of alternative service providers (Dean, 1973; Sekscenski et al., 1994; Weston, 1980). There is also some evidence that occupational regulation raises service cost. Where occupations are allowed to set restrictive practice conditions, cost of service tends to increase and utilization tends to decrease (Begun & Lippincott, 1980; Benham & Benham, 1975; Bond, 1983; Conrad & Emerson, 1981; Shepard, 1978). As very little research on occupational regulation has been conducted in Canada, it is uncertain to what extent the findings are applicable to this country.

Funding Structures

Funding Structures refers to the *methods of funding CBHSs organizations and service providers.* Two aspects of funding are distinguishable: the different methods of allocating funding to a delivery model (i.e., funding of organizations and programs) and the alternative methods of remunerating providers in those organizations (see Abelson & Hutchison, 1994).

The determination of what is the appropriate allocation of dollars to CBHSs organizations across a province or territory, is related directly to the issue of equity (i.e., the distribution of resources in such a way as to ensure that the greatest health needs are addressed). The literature review suggests that the deployment of resources from the provincial/territorial government to smaller geographic regions or areas affords the opportunity to address the equity issue when this allocation is based on population, demographic, and health needs information including consideration of socio-economic

and environmental factors (see Birch et al., 1993; B.C. Ministry of Health, 1993). It is noted that methodological issues regarding what measures serve best as a proxy of population health need are an ongoing topic of discussion.

Much of the discussion in the research literature on provider remuneration focuses on the differences between fee-for-service and non-fee-for-service payment schemes in relation to service utilization, health outcome, cost and policy implication. With respect to service outcomes, there is some evidence that care provided by physicians in community health centres or similar settings (under non-fee-for-service payment arrangements) is as good as, if not better than, the care provided by fee-for-service physicians (Battista & Spitzer, 1983; Renaud, 1980; Vohlonen, 1989). In particular, it is suggested that fee-for-service payment mechanisms provide a deterrent to the provision of effective prevention and promotion services and that they preclude the ability to set priorities for resource allocation, an important consideration for achieving equity. There is also some indication that non-fee-for-service payment arrangements result in economic efficiencies to the health system, largely relating to cost savings associated with reduced hospital utilization (Angus & Manga, 1990; Birch, Lomas, Rachlis & Abelson, 1990; Crichton, Robertson, Gordon & Farrant, 1991; Manning et al., 1984). However, due to methodological limitations in the studies, these conclusions should be treated with caution.

Governance

Governance refers to the *mechanisms through which communities and individuals participate in decisions about the organization and delivery of health services.*

Policy issues with respect to the governance of CBHSs include questions of who should govern the organization, what are appropriate appointment mechanisms, how is community representation achieved and what are necessary Board member skills. Unfortunately, there is a paucity of comparative empirical studies assessing the outcomes of different governance models. Much of the literature involves informed opinion articles.

One of the objectives of current health system reforms is to enhance the role of the consumer in health decision-making. However, there is a lack of clarity about the meaning of "citizen participation". The concept means different things to different groups or individuals. It is possible to conceptualize the options for the extent of consumer involvement in governance along a continuum in which the relative participation of lay community members versus traditional decision-makers (i.e., providers, politicians, government bureaucrats, local administrators) may be seen to fall along a continuum of:

information sharing only;
consultation (i.e., round tables, royal commissions, public forums, advisory committees);
power-sharing (i.e., joint policy boards and planning committees); and
lay decision-making (i.e., full transfer of decision-making power to lay individuals).

The current focus on enhancing citizen participation is based on two fundamental assumptions: citizens *want* to participate; and citizen participation leads to *better* decision-making. There is little clear evidence to support either of these assumptions (Charles & Demaio, 1993; Saltman, 1994). There is some evidence to suggest that citizens prefer not to assume major decision-making responsibilities, such as the allocation of health services resources.

The site visit findings suggested that the types of decisions in which individuals desire to be involved are directly related to the extent to which a decision directly affects them. Thus, as a client receiving a particular service, the individual's desire for input into decision-making is front and centre. When decisions involve the delivery of health services through a neighbourhood or community with which the individual perceives a strong identity, the desires of individuals to become involved will be greater than when the decisions are removed to a less tangible regional or central levels.

The literature offers no clear cut preference for Board appointment mechanisms. Although general elections are often advocated as the most democratic means of ensuring accountability to the community, the literature presents several concerns about this approach. These include the possibility of destructive competition between consumer and provider groups and a tendency for an over-representation of well-educated middle class participants at the expense of other groups (Checkoway and Doyle, 1980; Eyles, 1993).

In addition to substantiating the concern about disproportionate representation by the more "elite", our site visit results also suggested that, in cases where Board appointment was made through an election process, the actual proportion of the community participating in this process was so low as to raise a question about the true level of community accountability achieved. The undue influence of special interest groups and professional associations/groups was noted as a concern to be guarded against.

The types of community representation possible include:

formal political representation through elected officials,

descriptive representation based upon a reflection of the characteristics of a larger group (age and ethnicity are examples which have been used to address the issues of equitable representation for visible minorities but raise questions about stereotyping and which community interests should be represented), or

substantive representation based upon personal or professional interest in a defined set of issues and commitment to representing the interests of a group (physicians have traditionally been seen to be substantive representatives although the broader definition of health has called this role into question) (Eyles, 1993; Marmor & Morone, 1980).

One method that is advocated is the selection of board members from the ranks of existing community organizations. The linkage between these organizations and their narrowly defined constituents may result in more participation than the selection of candidates through general elections with a more diffuse constituency (Marmor & Morone, 1980).

The types of skills reported to be important for Board member effectiveness include: a strong personality (i.e., effective speaker, successful operator); being well connected with an understanding of and commitment to constituent interests; ability to mobilize a constituency when necessary; and knowledge of the issues (Godbout, 1981; O'Neill, 1992; Marmor & Morone, 1980).

Organizational Structures

Organizational Structure refers to the *model of personnel configuration utilized by the organization.*

Three fundamental options are available for the organization of personnel: a program (or product) structure reflecting the types of individuals served; a functional structure (based upon the disciplines providing service); or a matrix structure which attempts a combination of a program and functional structure (Daft, 1992). Program structures are often used when the organization's "outputs" or services require much collaboration on the part of service providers. Functional structures are advocated when specialized services with high quality standards are important. Matrix structures are often used when the environment is highly complex and requires emphasis both on coordination and quality. Not surprisingly, many hospitals use a matrix or modified matrix form of organization.

The most common organizational structure used within the CBHSs sites visited was a program structure. In some instances, a modified matrix structure was employed in which direct accountability and line authority followed a program structure but discipline-specific coordinators were employed to look after issues specific to the disciplines. A flat structure with little hierarchy and a structure which is not dominated by any one discipline were considered important for effectively undertaking desired service delivery approaches (i.e., using a socio-ecological rather than medical model, achieving service integration).

In whatever organizational structure is chosen for the delivery of CBHSs, the critical elements appear to be that (a) continuity of care to individuals is achieved, (b) a team approach is incorporated, and (c) that administrative bureaucracy does not impede the ability of front-line service providers to respond swiftly and decisively to rapidly changing situations.

Information Systems

Information Systems refer to *data collection, retrieval, storage and analysis capabilities necessary for the cost-effective provision of services.*

Information systems are important for (a) monitoring the health status of the population,

(b) evaluating service effectiveness, and (c) ensuring efficient and effective service processes. In addition, given the emphasis placed on self-help, it is important that CBHSs organizations facilitate consumer access to health information.

Of particular relevance from the policy perspective is the need for data linkages (a) across the province or territory (b) across community agencies and departments, and (c) across service providers. Identifying the most appropriate health status, health determinant and service measurements to be tracked and then implementing and maintaining the information systems involves considerable investment of energy and resources.

7 IMPLEMENTATION ISSUES

The Pan American Health Organization and the World Health Organization (1993) have identified the most frequently cited barriers to the achievement of a strong primary health care system. These are:

> "the predominantly curative orientation of the health services and of many professional groups;
>
> insufficient physical and financial resources for health promotion and protection activities and not enough basic health teams at the primary care level;
>
> resistance from professional groups and institutions within the sector to fully adopt the primary health care strategy and lack of interest, knowledge, motivation, and commitment on the part of health care personnel regarding the development of such strategies;
>
> the trend toward a narrow interpretation of primary health care as a single program or a set of vertical programs whose components are developed separately and unequally;
>
> the numerous institutions involved in the health sector in many countries, which makes it difficult to achieve intersectorial coordination and establish a uniform conceptual and operational definition of the primary health care strategy; and
>
> the insufficient development of community involvement as a component of primary health care strategy in the majority of countries" (PAHO & WHO, 1993, pp. 13-14).

Barriers and facilitators for implementing selected goals and objectives will vary from jurisdiction to jurisdiction. Implementation approaches will be highly dependent upon the values and beliefs of those holding the power to make changes, the pervading political and economic climate, and the decision-making processes historically employed. Several key implementation barriers and suggestions for overcoming these barriers are identified and discussed in the literature reviews. Further elaboration of these issues is beyond the scope of this study as it warrants another full-scale review and discussion. It will be up to individual jurisdictions to identify the most pervasive barriers to the implementation of the desired community-based health services model and to develop strategies for overcoming these barriers.

8 EVALUATION QUESTIONS

Once CBHSs outcome, process and structural goals and objectives have been implemented, it is important to evaluate the extent to which these goals and objectives have been achieved.

The evaluation questions presented in this section mirror the goals presented in the planning process. The three fundamental issues addressed in evaluation are:

Were desired CBHSs outcomes achieved?

Have management and service delivery processes been optimal?

Were structures adequate for accomplishing the targeted tasks?

In this section of the document, a template of possible evaluation questions is provided. Additionally, measurement dimensions for evaluating the attainment of the selected goals are introduced. More specific indicators and potential data sources for these measurement dimensions are presented in Appendix C. Levels of evidence to support the use of indicators are also presented within this Appendix. Indicators for particular processes and structures are rated according to whether empirical support exists to link them to intended outcomes or whether they are postulated in the literature, through site visit interviews or by the study team. The measurement dimensions and indicators are pertinent, not only for the evaluation of CBHSs, but also for choosing particular processes and structures in the planning phase.

TABLE I OUTCOME EVALUATION QUESTIONS

OUTCOME	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Service Effectiveness	Have CBHSs resulted in improvement in or maintenance of **health status** in those individuals or groups of individuals receiving services?	▪ improvement or maintenance of quality of life ▪ increase in level of functioning ▪ reduction in disability ▪ reduction in morbidity ▪ reduction in mortality
	Have CBHSs resulted in reduction in (or maintenance of existing levels of) **health risk** to individuals, families and the community?	▪ improvement in personal health practices of service recipients ▪ improvement in the physical environment for targeted individuals or the community at large ▪ improvement in the social environment for targeted individuals or the community
	Have CBHSs resulted in improving or maintaining the **capacity** of individuals, families and the community to withstand challenges to health?	▪ improvement in the quantity and quality of social resources for individuals or families served ▪ improvement in consumers' perception of their own capacity or ability to cope ▪ improvement in level of health knowledge of service recipients ▪ improvement in level of health skills demonstrated and used by service recipients
	Are CBHSs **relevant** to the community's dynamic health needs?	▪ CBHSs presence, timeliness and appropriateness in responding to unforeseen occurrences in community which negatively impact on health ▪ public and other organizations' perception of relevancy
	Are consumers **satisfied** with CBHSs?	▪ expressed satisfaction with the outcomes, processes and structures of services

TABLE I ~ (Continued) OUTCOME EVALUATION QUESTIONS

OUTCOME	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Economic Efficiency	Have CBHSs rationalized the costs to the health system while achieving satisfactory health status and consumer satisfaction outcomes?	▪ results of comparative economic analysis ▪ use of most economically efficient processes
	Have CBHSs costs been minimized while, at the same time, achieving effective results?	▪ absence of unnecessary/duplicated processes ▪ cost comparisons with other jurisdictions
	To what extent have CBHSs prevented unnecessary institutionalization?	▪ extent of unnecessary institutionalization
Equity	Are CBHSs universally available to all community members?	▪ CBHSs population coverage ▪ absence of exclusionary service entry policies and practices/ presence of inclusive policies and practices
	Are individuals or groups of individuals able to access CBHSs according to their level of health need or health risk?	▪ proportion of resources allocated to serving vulnerable groups ▪ assessment and treatment waiting times

TABLE I ~ (Continued) OUTCOME EVALUATION QUESTIONS

OUTCOME	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Community/Consumer Empowerment	To what extent does the community perceive control and ownership of CBHSs?	▪ community involvement in CBHSs ▪ partnership with other community organizations
	Do consumers of CBHSs have control over the management of their personal health services?	▪ consumer perception about their extent of control over decisions about their care
	Do consumers/community members possess adequate knowledge for making decisions?	▪ level of knowledge
Quality of Worklife	Do CBHSs informal and formal service providers experience a positive work environment and perceive job satisfaction?	▪ expressed satisfaction with quality of worklife ▪ rate of staff turnover attributable to working conditions ▪ respite care “need” levels for informal providers

TABLE II PROCESS EVALUATION QUESTIONS

PROCESS	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Management	Are CBHSs effectively and efficiently managed?	▪ achievement of goals and objectives ▪ compliance with national and provincial community health standards/guidelines ▪ presence of effective management systems (e.g., orientation, performance appraisal, time management) ▪ presence of positive management culture and practices
	Are CBHSs strategically managed?	▪ evidence of comprehensive needs assessment process ▪ evidence of vision and mission statements ▪ evidence of regular planning process ▪ evidence of effective implementation of workplan ▪ presence of policies and other mechanisms ensuring the use of appropriate intervention protocols ▪ evidence of health services evaluation
	Are CBHSs soundly managed financially?	▪ operation within budget limits

TABLE II ~ (Continued) PROCESS EVALUATION QUESTIONS

PROCESS	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Service Delivery	Do CBHSs encompass a range of promotive, preventive, primary curative, rehabilitative and supportive services?	▪ evidence of range of "core" services
	Do CBHSs provide continuity of care to individuals and families?	▪ evidence that care of individuals is managed across time and service location/placement
	Are CBHSs coordinated across interdisciplinary service providers?	▪ evidence that CBHSs are inter-disciplinary and coordinated
	Do CBHSs providers collaborate with other community organizations to ensure services are continuous and complementary?	▪ evidence of effective collaboration with other organizations
	Are CBHSs client-centred?	▪ evidence of consumer access to information ▪ evidence of informed consent policy and practice ▪ evidence that consumers have choice of service provider ▪ evidence that consumer is active partner in management of own care
	Are CBHSs intervention strategies/options based upon best available evidence?	▪ provider adherence to established practice protocols and guidelines for effective care ▪ evidence of strategies for fostering appropriate self-care

TABLE III EVALUATION QUESTIONS REGARDING STRUCTURE

STRUCTURE	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Service Catchment	Does the CBHSs organization serve an identifiable "community" or sub-group, defined either by geographic territory or common need?	▪ evidence of a defined jurisdiction
	Are CBHSs accessible to the population served and sub-groups targeted?	▪ evidence of service accessibility (e.g., hours of operation, waiting lists, physical accessibility, location of services, travel distances)
Health Human Resources	Does the CBHSs organization use and support the most cost-effective service providers?	▪ evidence that informal caregivers are appropriately incorporated and supported ▪ evidence of the integration of formal, informal and self-care providers ▪ evidence that indigenous workers are appropriately incorporated and supported, where justified by service needs ▪ use of alternative providers (e.g., midwives, nurse practitioners) ▪ evidence of effective integration/coordination of formal, informal and self care providers
Provider Skills	Do CBHSs providers possess the skill necessary for the delivery of community health services?	▪ evidence of training and support for informal care providers ▪ evidence of orientation and training of formal providers to work in a CBHSs setting
Occupational Regulation	Does the provincial/territorial legislation under which CBHSs organizations operate enable cost-effective use of health human resources?	▪ presence of appropriate regulatory boards ▪ presence of appropriate occupational regulation ▪ recognition of alternative providers ▪ absence of unnecessary restrictions

TABLE III ~ (Continued) EVALUATION QUESTIONS REGARDING STRUCTURE

STRUCTURE	EVALUATION QUESTIONS	MEASUREMENT DIMENSIONS
Funding	Does the funding model for CBHSs organizations facilitate cost-effective and creative use of available health services dollars?	▪ extent to which chosen funding model has been demonstrated to be most cost-effective while, at the same time, ensuring equitable access to services
	Does the funding model for CBHSs providers facilitate the most cost-effective and creative use of available health services dollars?	▪ extent to which the chosen provider reimbursement model has been demonstrated to be cost-effective and to discourage underserving and unnecessary overserving
Governance	Does the governance structure ensure adequate representation and involvement by the community served in the formation, implementation and evaluation of CBHSs?	▪ type of board appointment mechanism ▪ community participation in decision-making
	Is the mandate of the CBHSs governance board clear?	▪ presence of clear provincial/territorial mandate expressed in legislation
	Do CBHSs Board members understand their role and possess the necessary skills to effectively govern the organization?	▪ demonstrated skills of Board members
Organization of Services	Is the CBHSs organization structured to facilitate cost-effective and consumer-oriented service delivery approaches?	▪ extent to which chosen organizational structure facilitates an integrated team approach and rapid response to issues
Information Systems	Does the CBHSs organization utilize information system(s) which facilitate the planning, delivery, monitoring and evaluation of CBHSs?	▪ presence of efficient CBHSs information system(s) ▪ presence of data resource libraries

9 APPLICATION OF FRAMEWORK

In this section, the general steps which should be taken at each phase of the decision-making cycle are presented. Some provinces and territories have developed detailed guidelines for undertaking community needs assessment and planning/evaluation processes. The following suggested application steps reflect generally accepted procedures and should complement the existing guidelines.

9.1 Community Health Needs Assessment

STEPS IN COMMUNITY HEALTH NEEDS ASSESSMENT
1. Plan Needs Assessment Define community/population to be assessed Select relevant indicators (see Appendix B) dentify best data sources Select stakeholders for participation Design specific data collection methodologies (e.g., surveys)
2. Collect and Analyze Data Collect data from selected data sources Continue involvement of stakeholders throughout this step Identify trends over time and deficiencies when data are compared with other jurisdictions Identify priorities based on identified population health needs and community concerns Determine service gaps and duplications Compare available community resources with community needs, concerns and preferences
3. Prepare Recommendations With stakeholders, formulate recommendations for CBHSs response to priority issues

Comments

The needs assessment should include three elements: population health needs, consumer concerns and preferences, and community capacity. Appendix B serves as a listing of possible indicators and data sources.

As much as possible, the assessment should represent a community rather than health system endeavour (i.e., the needs assessment process should be coordinated with similar activities in other sectors of society).

The needs assessment data are useful for a number of purposes. These include ongoing program monitoring (e.g., communicable diseases, environmental risk factors) as well as periodic analysis of the population's health status. The latter use of data may occur on a regular basis (e.g., every three years) as part of the community health needs assessment process.

The preparation of recommendations represents the product of the needs assessment process and serves as a starting point for the planning of CBHSs. The results of the needs assessment may also be compared with previous results to determine whether progress has been made in targeted areas.

9.2 Planning

CBHSs PLANNING STEPS
1. Establish Goals Review results of community health needs assessment process Confirm priority health issues Establish outcome, process and structural goals Select appropriate indicators for determining goal achievement (see Appendix C)
2. Determine Measurable Objectives For each goal selected: Identify specific objectives by program or service area Set target for performance Set timeline for achievement of objectives
3. Develop Workplan Identify necessary steps in order to achieve identified objectives Determine necessary resources and linkages Determine timelines for each step Assign responsibilities Document expectations in written workplan
4. Plan for Evaluation Determine most important evaluation question(s) for achievement of goals and objectives Identify most appropriate indicators for addressing evaluation questions Identify most appropriate data sources for undertaking measurement Identify necessary data elements to be tracked during program/service implementation

Comments

Because the goals are broad statements of desired results, they will generally be relevant over longer time spans than will the specific objectives for achieving them. Once established, these goals need to be reviewed and updated on a regular basis (e.g., every three years). Progress towards achieving the goals should be monitored on a regular basis.

Measurable objectives are established as they relate to the specific programs which are in place or are put in place to accomplish them. The outcome, process, and structure indicators listed in Appendix C offer a template of possible indicators which may accompany selected CBHSs goals. The indicators will need to be further specified according to the particular health issue addressed. For example, the indicator *Percent of individuals within program/service for whom significant reduction in disease is achieved* will need to be further specified according to the service in question. The actual percent reduction desired and the determination of what constitutes a "significant" reduction will also need to be established.

Given the inherent problem with generalizing the findings of current studies involving organizational and human resources dimensions, decision-makers will need to assess the local appropriateness of a process or structural intervention of proven effectiveness elsewhere.

It is important to involve the public and key community stakeholder participation in this planning process.

9.3 Implementation

IMPLEMENTATION STEPS
1. Identify Barriers and Facilitators to Implementation Identify barriers and facilitators experienced and reported by others Identify barriers and facilitators specific to own jurisdiction
2. Determine Strategies for Implementation Identify and analyze options for overcoming barriers and incorporating facilitators Select strategies for managing the change process
3. Implement Workplan Access or develop necessary structures (i.e., resources and linkages) Manage human and fiscal resources to accomplish stated objectives Communicate issues and progress with the public

Comments

The literature provides some information about the best vehicles for managing the change process. (e.g., see Eisenberg, 1986 regarding influencing physician behaviour). These can assist in planning ways of overcoming barriers and in facilitating implementation.

9.4 Evaluation

Evaluation of CBHSs may be undertaken at various levels. For example, a provincial/ territorial government or regional health authority may be interested in evaluating the CBHSs delivery system as a whole. In addition, specific CBHSs organizations and programs are interested in evaluating their particular services. At all levels, an evaluation is generally based upon the goals and objectives which have been pre-determined in the planning or design phases (i.e., it is hard to evaluate the extent to which outcomes have been achieved if one is unsure what the intended outcomes are). However, it is also possible to enter the management cycle at the evaluation process by selecting the evaluation questions most relevant at a given time to a particular jurisdiction under study.

EVALUATION STEPS
1. Plan Evaluation Identify and select stakeholders for participation in evaluation Select evaluation questions of most relevance Select most appropriate measurement dimensions and indicators Identify the most appropriate data sources for obtaining desired data Design data collection and analysis methodologies Document evaluation workplan Identify and access necessary resources for conducting evaluation
2. Conduct Evaluation Collect data from selected data sources Analyze data Compare results with pre-determined targets, standards or benchmarks Relate evaluation results to population health status indicators, where possible
3. Prepare Recommendations Formulate recommendations for continuation/discontinuation or adjustment of programs and services, based upon evaluation results

Comments

Evaluation may focus on the outcomes, processes or structures of CBHSs delivery. Evaluation questions, measurement dimensions and indicators are presented in this document and in Appendix C.

In the evaluation phase, the extent to which expected service outcomes are achieved is assessed. This is distinguished from research studies which attempt to study the effectiveness of various intervention alternatives such as randomized controlled trials (RCTs).

All health services sectors are attempting to be more outcomes-oriented. The process and structural indicators included in this document have been selected based upon consideration of the evidence of their association with the five CBHSs outcomes identified. Thus, where strong evidence exists to support particular processes or structures, it is appropriate to evaluate the extent to which CBHSs have incorporated them and to monitor associated intended outcomes. Duplicating previous studies of effectiveness (e.g., RCTs) with comparable subjects is not warranted in these instances.

Types of evaluation designs which may be used range from formal research initiatives to informal data collection and analysis, depending upon the evaluation question of interest and available resources. An attempt should be made to undertake as rigorous an evaluation as is possible within existing resource limitations.

10 CONCLUSION

Although policy makers have long acknowledged and advocated for a greater balance in emphasis between the institutional and community-based sectors of the health system, in reality, little evidence exists to support the contention that such a shift has actually occurred. In most provinces, community-based health services remain a fragmented series of marginalized services rather than offering a substantial, cohesive and complementary alternative to institutional care. Even in provinces which have attempted integrated and comprehensive models of community-based services delivery, the total health services dollars dedicated to these models remain only a small fraction of those extended to the institutional sector.

It is difficult to state at what point an existing service delivery model has truly embraced the concept and principles of a *substantive* community-based health services delivery system, as enunciated by the World Health Organization's definition of *primary health care*. This study did not set out to evaluate different community-based service delivery models (e.g., CHCs, CLSCs, HMOs) but to develop a framework whereby such evaluations may be conducted. Because previous studies have noted extreme variations within models, this study took the approach of identifying the relevant dimensions of models (i.e., *modalities*) which are considered to be the most appropriate for achieving desired outcomes. Thus, health human resources and organizational modalities such as provider roles, health workforce management, governance, service delivery approaches, and funding models were incorporated.

Having now identified the desirable characteristics of community-based service delivery models, however, it is possible to attempt comparisons across alternative models. For example, it is noted that some service delivery models encountered during the study closely approximate the concept of community-based health services, as defined and advocated in this framework (e.g., CLSCs). Other models demonstrate only a limited number of the desired characteristics (e.g., those involving defined catchment areas in which service delivery is dominated by single-discipline providers working under a capitation payment system). These latter models, while potentially forming a sub-set of a community-based health services delivery system, do not capture the comprehensiveness and cohesiveness of the substantive system advocated in this framework.

The framework identifies the following key directions for community-based health services in Canada:

i. **Community-based health services delivery systems which are comprehensive, integrated and substantive.**

In order to accomplish the World Health Organization vision of community-based health services as a "central function and main focus" of the health system, it is necessary to acknowledge the very different but complementary objectives and approaches evident in institutional and community-based health services. The strengths of community-based services are its holistic and social oriented approaches to addressing individual and population health needs and its emphasis on working jointly with natural community partners in addressing the underlying determinants of health. In contrast, the strength of the institutional sector is in the development and application of specialized technological responses to specific health issues. In order for the health system to become more effective

as a whole, it is suggested that these two sectors should be afforded equal and complementary status in addressing the multi-dimensional nature of health issues evident in today's society.

For years, community-based health services in most Canadian jurisdictions have been offered to Canadians through a complex array of fragmented service delivery organizations and programs. These include public health agencies or departments, home care programs, primary medical care clinics, social services agencies, mental health departments, and the various forms of community health centres evident across the country. Coordination between service providers has often been lacking, leaving the consumer to fend for him or herself through numerous referral processes, service providers and locations. In addition, the availability of some community-based health services has been inconsistent across a province or territory.

The concept advocated in this framework involves greater comprehensiveness and integration of community-based health services which are offered to consumers in readily accessible neighbourhood locations. As well, the system of CBHSs should encompass the entire province or territory.

ii. **Incorporation of organizational and human resources approaches which contribute to the desired outcomes of community-based health services.**

It is apparent, both through the literature reviews and the site visits undertaken as part of this study, that better ways of conceptualizing and delivering community-based health services exist than are currently practiced. Although no one Canadian model of community-based health services delivery is advocated for all jurisdictions, a desirable model should incorporate the following thirteen organizational and human resource management characteristics in order to achieve the outcomes desired of a comprehensive, integrated, and substantive community-based health service delivery model:

a **clear definition of "community"** based on geographical territory or common need;

a **comprehensive range of *coordinated* health promotion, prevention, primary curative, rehabilitative and community support services** which address the ongoing needs of the community under consideration, as well as the special needs of high-risk and vulnerable clients;

integrated, interdisciplinary, multi-service teams of providers with case coordination for each high need client or family;

client choice in the selection of provider and intervention strategies within reasonable parameters;

population-based funding of service jurisdictions, adjusted for health need;

non fee-for-service remuneration of service providers;

partnership between consumers and providers in the planning, delivery and evaluation of the health services delivery system (i.e., consumer involvement in decision-making occurs beyond a token level);

effective **partnership with other community organizations** in addressing the social and physical environmental determinants of health and to ensure health services are continuous with and complementary to other community services;

a human resources continuum which incorporates the appropriate use of and support for **self-care, informal and formal service providers**;

use of the **most effective and economically efficient health service providers**;

training/education of health services providers (self-care, informal and formal) consistent with the philosophy, objectives and approaches inherent in community-based health services delivery (i.e., broad understanding of health and its determinants; interdisciplinary team approaches; and a focus on promotion/ prevention and early intervention);

legislative, organizational and professional policies which enable the use of cost-effective alternative service providers and which do not unnecessarily restrict competitive and creative professional practices; and

positive and flexible management practices.

REFERENCES

Abelson, J., & Hutchison, B. (1994). *Primary health care delivery models: Review of the international literature* McMaster University Centre for Health Economics and Policy Analysis Working paper 94-15, September.

Abramowitz, J. & Berg, L.E. (1973). *Primary health care delivery models: What can Ontario learn from other jurisdictions? A review of the literature.* Centre for Health Economics and Policy Analysis, McMaster University.

Angus, D.E. (1991). *Review of significant health care commissions and task forces in Canada since 1983-84.* Ottawa: Canadian Medical Association, Canadian Nurses Association and Canadian Hospital Association.

Australian Community Health Association (1993). *Manual of standards for community and other primary health care services.* Bondi Junction, New South Wales.

Battista, R.N. & Spitzer, W.O. (1983). Adult cancer prevention in primary care: Contrasts among primary care practice settings in Quebec. *American Journal of Public Health* 73:1040-1041.

Beauchamp, T.L., & Childress, J.F. (1994). *Principles of biomedical ethics* (4th ed.). New York: Oxford University Press.

Begun, J.W. & Lippincott, R.C. (1980). The politics of professional control: The case of optometry. *Research in the Sociology of Health Care* 1L 55-103.

Benham, L. & Benham, A. (1975). Regulating through the professions: A perspective on information control. *Journal of Law and Economics* 18:421-447.

Birch, S., Eyles, J., Hurley, J., Hutchison, B. & Chambers, S. (1993). A needs-based approach to resource allocation in health care. *Canadian Public Policy* XIX:1:68-85.

Birch, S., Lomas, J., Rachlis, M. & Abelson, J. (1990). *HSO performance: A critical appraisal of current research.* Centre for Health Economics and Policy Analysis, McMaster University.

Bond, R.S. et al. (1983). Self-regulation in optometry: The impact on price and quality. *Law and Human Behaviour* 7:219-234.

British Columbia Ministry of Health (1993). Draft 2, Discussion Paper, Regional Funding Allocation Model. A Funding Scheme to Support New Directions Decentralization Initiative. New Directions Development Office.

Brown, S.A. & Grimes, D.E. (1993). Nurse practitioners and certified nurse-midwives: A meta-analysis of studies on nurses in primary care roles. *American Nurses Association Publications.*

Canadian Council on Health Services Accreditation (1995). *Community health services standards*. Ottawa.

Canadian Task Force on the Periodic Health Examination (1994). *The Canadian guide to clinical preventive health care.* Ottawa: Minister of Supply and Services Canada.

Casey, R. et al. (1984). Fever therapy: An educational intervention for parents. *Pediatrics* 73:600-605.

Chambers, L.W. et al. (1977). A controlled trial of the impact of the family practice nurse on volume, quality, and cost of rural health services. *Medical Care* 15:971-981.

Charles, C., & DeMaio, S. (1993). Lay participation in health care decision making: A conceptual framework. *Journal of Health Politics, Policy and Law* 18(4)881-904.

Checkoway, B., & Doyle, M. (1980). Community organizing lessons for health care consumers. *Journal of Health Politics, Policy and Law* 7(3):213-226.

Conrad, D.A. & Emerson, M.L. (1981). State dental practice acts: Implications for competition. *Journal of Health Politics, Policy and Law* 5:610-630.

Crichton, A., Robertson, A., Gordon, C. & Farrant, W. (1991). *Implementing Canada's social model of health care: A review of the literature on organizational models for community-based health services.* NHRDP Grant No. 5-52047-2522.

Daft, R.L. (1992). *Organization theory and design* (4th ed.). St. Paul: West Publishing Company.

Dean, W.J. (1973). State legislation for physician's assistants: A review and analysis. *Health Services Reports* 88:3-12.

Donabedien, A. (1966). Evaluating the quality of medical care. *Milbank Memorial Fund* 44(3):166-203.

Drummond, F., Stoddart, G.L., & Torrance, G.W. (1987). *Methods for the economic evaluation of health care programmes*. Oxford: Oxford University Press.

Economic Council of Canada (1981). *Reforming Regulation* (Chapter 10). Ottawa: Canadian Government Publishing Centre.

Edmonton Health Information Network (1995). *Health information for planning and evaluating the delivery of health services*. Edmonton: Healthcare Quality and Outcomes Research Centre, University of Alberta.

Eisenberg, J.M. (1986). *Doctors' decisions and the cost of medical care.* Ann Arbor: Health Administration Press Perspectives.

Eyles, J. (1993). *The role of the citizen in health-care decision making.* McMaster University Centre for Health Economics and Policy Analysis. Policy Commentary C93-1.

Federal, Provincial and Territorial Advisory Committee on Population Health (1994). *Strategies for population health: Investing in the health of* Canadians. Ottawa: Minister of Supply and Services.

Gaumer, G.L. (1984). Regulating health professionals: A review of the empirical literature. *Milbank Memorial Fund Quarterly* 62:380-416.

Giles, W. et al. (1992). Antenatal care of low risk obstetric patients by midwives: A randomised controlled trial. *Medical Journal of Australia* 157:158-161.

Glasgow, R.E. et al. (1992). Improving self-care among older patients with Type II diabetes: the "sixty something..." study. *Patient Education and Counselling* 19:61-74.

Godbout, J. (1981). Is consumer control possible in health care services? The Quebec case. *International Journal of Health Services* 11(1):151-167.

Goeppinger, J. et al. (1989). A reexamination of the effectiveness of self-care education for persons with arthritis. *Arthritis and Rheumatism* 32:706-716.

Gross, J.S. (1984). *Of foxes and hen houses: Licensing and the health professions.* Westport, Conn.: Quorum Books.

Health and Welfare Canada (1993). *Planning for health: Toward informed decision-making*. Ottawa.

Jenkinson, D. et al. (1988). Comparison of effects of a self management booklet and audiocassette for patients with asthma. *British Medical Journal* 297:267-270.

Jones, D.A. and Salvage, A.V. (1992). Attitudes to caring among a group of informal carers of elderly dependents. *British Medical Journal* 297:267-270.

Lightfoot, P. (1995). in Edmonton Health Information Network. *Health information for planning and evaluating the delivery of health services.* Edmonton: Healthcare Quality and Outcomes Research Centre, University of Alberta.

Manning, W.G., Leibowitz, A. et al. (1984). A controlled trial of the effect of a prepaid group practice on use of services. *New England Journal of Medicine* 310(23):1505-1510.

Marmor, T.R. & Marone, J.A. (1980). Representing consumer interests: Imbalanced markets, health planning and HSA's. *Milbank Memorial Fund Quarterly/Health and Society* 58(1):125-165.

Mazzuca, S.A. (1982). Does patient education in chronic disease have therapeutic value? *Journal of Chronic Diseases* 35:521-529.

Nicoletti, J. & Flater, L. (1975). A community-oriented program for training and using volunteers. *Community Mental Health Journal* 11:58-63.

O'Donnell, J.M. & George, K. (1977). The use of volunteers in a community mental health center emergency and reception service: A comparative study of professional and lay telephone counselling. *Community Mental Health Journal* 13:3-12.

Office of Technology Assessment (1986). *Health technology case study 37: Nurse practitioner, physician assistant and certified nurse midwives: A policy analysis.* (OTA No. 224-8996). Washington, DC: Office of Technology Assessment, US Congress.

Ondrejka, D. (1983). A descriptive evaluation of a self-care medication program in industry. *Occupational Health Nursing* 31:21-27.

O'Neill, M. (1992). Community participation in Quebec's health system: A strategy to curtail community empowerment? *International Journal of Health Services* 22(2):287-301.

Pan American Health Organization & World Health Organization (1993). *Implementation of the global strategy for health for all by the year 2000: Second evaluation.* Volume 3, Region of the Americas. Washington, D.C.

Pew Health Professions Commission (1994). *Community health workers: Integral yet often overlooked members of the health care workforce.* San Francisco.

Reid, M.L. & Morris, J.B. (1979). Perinatal care and cost effectiveness. *Medical Care* 17:491-500.

Renaud, M. et al. (1980). Practice settings and prescribing profiles: The simulation of tension headaches to general practitioners working in different practice settings in the Montreal area. *American Journal of Public Health* 70:1068-1073.

Roberts, C.R. et al. (1983). Reducing physician visits for colds through consumer education. *Journal of American Medical Association* 250:1986-1989.

Rubin, R.R. et al. (1989). Effect of diabetes education on self-care, metabolic control, and emotional well-being. *Diabetes Care* 12:673-679.

Saltman, R.B. (1994). Patient choice and patient empowerment in northern European health systems: A conceptual framework. *International Journal of Health Sciences* 24(2):201-229.

Saunders, L.D., & Wanke, M.I. (in press). Towards a framework for health services research. *Healthcare Management Forum.*

Sekscenski, E.S. et al. (1994). State practice environments and the supply of physician assistants, nurse practitioners, and certified nurse-midwives. *New England Journal of Medicine* 331:1266-1271.

Seltzer, M.M. et al. (1992). Professional and family collaboration in case management: A hospital-based replication of a community-based study. *Social Work in Health Care* 17:1-22.

Shepard, L. (1978). Licensing restrictions and the cost of dental care. *Journal of Law and Economics* 21:187-201.

Sullivan, J.A. et al. (1978). Overcoming barriers to the employment and utilization of the nurse practitioner. *American Journal of Public Health* 68:1097-1103.

Vickery, D.M. et al. (1983). Effects of a self-care education program on medical visits. *Journal of American Medical Association* 250:2952-2956.

Vohlonen, I. et al. (1975). Re-organizing primary medical care in Finland: The personal doctor program. *Health Policy* 13:65-79.

Voltmann, J.D. (1975). Jamestown medical clinic system. *Journal of the American Medical Association.* 234:303-304.

Wertz, R.T. et al. (1986). Comparison of clinic, home, and deferred language treatment for aphasia. *Archives of Neurology* 43:653-658.

Weston, J.L. (1980). Distribution of nurse practitioners and physician assistants: Implications of legal constraints and reimbursement. *Public Health Report* 95:253-258.

Wiernikowski, J.T. & Dawson, S. (1991). Evaluation of a home intravenous antibiotic program in pediatric oncology. *American Journal of Pediatric Haematology/Oncology* 13:144-147.

Wilson, S.R. et al. (1993). A controlled trial of two forms of self-management education for adults with asthma. *American Journal of Medicine* 94:564-576.

World Health Organization (1948). *World Health Organization Constitution.* Geneva.

World Health Organization (1978). *Alma-Ata: Primary health care.* Geneva.

World Health Organization (1988). *From Alma-Ata to the year 2000: Reflections at the midpoint*. Geneva.

World Health Organization (1990). *Coordinated health and human resources development*. Technical Report Series 801. Geneva.

World Health Organization, Technical Report Series No. 717 (1985) cited in Abelson, J., & Hutchison, B., (1994) *Primary health care delivery models: Review of the international literature*. Centre for Health Economics and Policy Analysis, McMaster University. Working paper 94-15.

World Health Organization, Health and Welfare Canada and Canadian Public Health Association (1986). *Ottawa charter for health promotion.* International Conference on Health Promotion, Ottawa.

World Health Organization Regional Office for Europe (1984). *Health promotion: A discussion document on the concept and principles.* Copenhagen.

APPENDICES

APPENDIX A

GLOSSARY OF TERMS

ABERRATIONS FROM HEALTH	measures of health status including "mortality, morbidity, disability, and inability to function in a role".[3]
APPROPRIATE	"extent to which a particular procedure, treatment, test, or service is effective, is clearly indicated, is not excessive, is adequate in quantity, and is provided in the setting best suited to the client's needs."[4]
ASSESSMENT	"process by which strengths, weaknesses, problems, and needs are determined."[5]
CAPITATION PAYMENT	"a dollar amount paid for each eligible insured person enrolled in a health centre or region."[6]
CARE COORDINATOR	"the individual within the health care services sector who coordinates the provision of services to individuals, ensuring that the individual's [and family's] needs are met."[7]
CLIENT	"any individual, family, community group and/or community receiving service."[8]
COMMUNITY	a grouping of individuals defined either by geographical territory or by issues of "common unity"; "an interactive group of people (who may live in a geographical location) who cooperate in common activities and/or solve mutual concerns"[9]

3 Lightfoot, P. In Edmonton Health Information Network (1995). *Health Information for Planning and Evaluating the Delivery of Health Services*. Edmonton: Healthcare Quality and Outcomes Research Centre, University of Alberta.

4 Canadian Council on Health Services Accreditation (1994). *Community Health Service Standards.*

5 *Ibid.*

6 Canadian Public Health Association (1990, November). *Community Health-Public Health Nursing in Canada: Preparation and Practice*.

7 *Ibid.*

8 *Ibid*. Canadian Council on Health Services Accreditation.

9 *Ibid*. Canadian Public Health Association.

COMMUNITY CAPACITY	the resources available to and used by the community in addressing its needs; assessment of the community's capacity involves consideration of health and related human, capital, technical and financial resources; and service availability and utilization.
COMMUNITY DEVELOPMENT	"a strategy involving partnership with community members to solve problems and build strength, self-sufficiency and well-being".[10]
COMMUNITY/CONSUMER EMPOWERMENT	the extent to which the community is involved in decisions about service delivery and individual consumers perceive control over the decisions affecting their health.
COMMUNITY HEALTH NEEDS THE ASSESSMENT	a review and analysis of the community's current health status and factors which influence health; the community's perceptions of priority health issues and service preferences; and the current capacity of the community's resources to address identified community health issues.
COMMUNITY-BASED HEALTH SERVICES	a comprehensive range of non-institutionalized health services developed jointly with the community and including promotive, preventive, primary curative, rehabilitative and community support service strategies which are delivered through integrated, interdisciplinary, intersectorial and client-centred service delivery approaches.
DEMOGRAPHIC DATA	the structure and growth dynamics of a population of interest.
EQUITABLE ACCESS	the extent to which individuals and groups of individuals are able to receive services according to their level of health need or risk.
EQUITY	"fairness or justice in distributing health resources or power within the health system, or fairness and justice in accessing services".[11]
EVALUATION	an analysis of the extent to which desired outcomes were achieved, optimal processes were employed, and structures were adequate for undertaking the processes.

10 Canadian Council on Health Services Accreditation (1994). *Community Health Service Standards*.

11 Health and Welfare Canada (1993). *Planning for Health: Toward Informed Decision-Making*.

EMPOWERMENT	the sense of control perceived by individuals, families or communities with respect to the decisions affecting their health.
FUNDING STRUCTURES	methods of financing organizations and service providers.
GOAL	"a broad statement of a desired result that may not be achieved easily or within a short timeframe, but that is potentially attainable"[12]
GOVERNANCE	mechanisms through which communities and individuals participate in decisions about the organization and delivery of health services.
GOVERNING BODY	"the individual(s), group or agency that has ultimate authority and responsibility for establishing policy, maintaining client service quality, and providing for organizational management and planning; other names for this group include the board, board of trustees, board of governors, . . . regional board, community board."[13]
HEALTH	"the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs, and, on the other hand, to cope with the environment. Health is therefore seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capacities".[14] "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".[15]
HEALTH CONCERNS	perceptions of the public about their own health needs and the collective health needs of the community in which they live.
HEALTH DETERMINANTS	factors of human biology; cultural, physical and social environment; behaviour and lifestyle (including the health services delivery system); and public policy that influence health.

12 Alberta Health (1995). *Evidence-Based Decision-Making: A Guide to Using Indicators in Health Planning*.

13 Canadian Council on Health Services Accreditation (1994). *Community Health Services Standards.*

14 World Health Organization Regional Office for Europe (1984). *Health Promotion: A Discussion document on the concept and principles.* Copenhagen.

15 World Health Organization Constitution. Geneva (1948).

HEALTH HUMAN RESOURCES	range of health services providers that could be relied upon to improve the health outcomes of individuals and communities. In the context of community-based health services, the health human resources continuum may be seen as comprising three main categories: self-care, informal, and formal service providers.
HEALTH POTENTIAL	a measurement of health status involving "fitness, functioning, coping, resilience, ability to withstand challenge, and resourcefulness."[16]
HEALTH PROMOTION	"the process of enabling people to increase control over, and to improve, their health."[17]
HOLISTIC	"an approach to health in which the whole is greater than the sum of its parts, whether the whole is an individual, a family or community"[18]
HUMAN, CAPITAL, TECHNICAL FINANCIAL RESOURCES	measures of community capacity involving the availability of service providers; facilities, equipment and technical supports; and funding.
INDICATOR	"measurable attribute or phenomenon relating to the structure, process or outcome of care for which data are collected in the monitoring and evaluation process."[19]
INDIGENOUS HEALTH ARE SERVICES WORKERS	informal or formal providers who are given limited training and used to deliver health services to their peers or within their own communities.
INFORMATION SYSTEMS	data collection, retrieval, storage and analysis capabilities necessary for the cost-effective provision of services.
IMPLEMENTATION	the act of carrying out or fulfilling an established plan.

16 Lightfoot, P. In Edmonton Health Information Network (1995). *Health Information for Planning and Evaluating the Delivery of Health Services*. Edmonton: Healthcare Quality and Outcomes Research Centre, University of Alberta.

17 World Health Organization, Health and Welfare Canada & Canadian Public Health Association (1986). *Ottawa Charter on Health Promotion.* Ottawa.

18 Canadian Council on Health Services Accreditation (1994). *Community Health Services Standards.*

19 *Ibid.*

INTERDISCIPLINARY TEAM	a group of service providers with varying competencies and skills who "share a common health goal and common objectives determined by community needs, to which the achievement of each member of the team contributes, in a coordinated manner, in accordance with his/her competence and skills and respecting the functions of others"[20]
INTERVENTION	"to come between as an influencing force; to settle, modify, or hinder events; an action by a service provider to prevent or modify client outcomes"[21]
MANAGEMENT	the planning, organization, implementation, monitoring and evaluation of services; "The fiscal and general management of a . . .service, as distinct from the direct provision of services."[22]
MULTISKILLED PROVIDERS	health service providers who have developed competencies in more than one discipline area.
OBJECTIVE	"a specific statement of intent, in measurable form, that clarifies how a particular goal will be addressed."[23]
OCCUPATIONAL REGULATION	statutory framework which establishes what practitioners can do, determines entry-into-practice conditions, sets conditions under which practitioners must perform their functions, and specifies who can use what kind of title.
ORGANIZATION	the entity through which community-based health services are provided.
ORGANIZATIONAL STRUCTURE	model of personnel configuration utilized by the organization.
OUTCOME	the consequence or impact of a service that may be intended and/or unintended.[24]

20 World Health Organization Technical Report Series No. 717. , 1985 cited in Abelson J. and Hutchison, B. (1994) *Primary Health Care Delivery Models: Review of the International Literature.* McMaster University Centre for Health Economics and Policy Analysis Working Paper 94-15.

21 Canadian Council on Health Services Accreditation (1994). *Community Health Services Standards.*

22 *Ibid.*

23 Alberta Health (1995). *Evidence-Based Decision Making: A Guide to Using Indicators in Health Planning.*

24 Adapted from Canadian Council on Health Services Accreditation (1994). *Community Health Services Standards.*

OUTCOME INDICATOR	a type of measure that describes change attributable to service processes.
PLANNING	the design or re-design of services to address identified issues.; planning involves setting goals and objectives, and determining a course of action for accomplishing the goals and objectives.
PREVENTION	activities designed to prevent the occurrence or progression of death, disease or disability; "A process which focuses on the early detection of disease (i.e., screening) and encompasses lifestyles as well as biological and environmental factors. Primary prevention is an action designed to reduce or eliminate the possibility of disease developing. Secondary prevention is an action designed to interrupt or minimize, by early detection, the progress of a disease or the irreversible damage from that disease. Tertiary prevention is an action designed to slow the progress of disease and/or to reduce the resultant disability to a minimum."[25]
PRIMARY CURATIVE SERVICES	primary health care activities designed to address identified health issues or conditions.
PRIMARY HEALTH CARE	"essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford.... It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process...Primary Health Care addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative [and supportive] services accordingly."[26]

25 World Health Organization cited in Canadian Council on Health Services Accreditation (1994).

26 World Health Organization Alma-Ata Declaration (1978). Geneva.

PROCESS INDICATOR	"a type of operations indicator that describes the activities and tasks undertaken to achieve program or service objectives."[27]
PROCESSES	the activities or approaches which are employed to achieve desired outcomes.
PROGRAM	"an organized system of services or interrelated series of activities designed to address the health needs of clients. The approach is interdisciplinary and there is an individual accountable for the administration of the program. The term is also used to describe a plan of therapy for clients. The plan may be individualized or organized for a group of clients with similar needs."[28]
PROVIDER (INFORMAL)	health service workers who provide their services on a voluntary basis and who receive no legal recognition for their work.
PROVIDER (FORMAL)	paid service providers ranging from highly qualified specialists to workers who have received minimal on-the-job training.
PROVIDER SKILLS	the initial acquisition and continuing development of health human resources.
QUALITY OF WORKLIFE	the extent to which a positive work environment and job satisfaction for health services providers is achieved.
REHABILITATION	services designed to improve or maintain the ability of individuals to function as independently as possible; rehabilitation services may address either physical or social health needs.
SELF-CARE	decisions and actions initiated and controlled by an individual, family or community with the goal of promoting, protecting or improving health.[29]
SERVICE AVAILABILITY	the type and level of community-based health and related services made accessible to the community.

27 Alberta Health (1995). *Evidence-Based Decision Making: A Guide to Using Indicators in Health Planning.*

28 Canadian Council on Health Services Accreditation (1994). *Community Health Service Standards.*

29 Adapted from Canadian Public Health Association (1990). *Community Health - Public Health Nursing in Canada: Preparation and Practice.*

SERVICE CATCHMENT	definition of the population or jurisdiction being served, including the parameters for determining service accessibility.
SERVICE DELIVERY PROCESSES	activities undertaken to address the health needs of individuals, families and the community.
SERVICE PREFERENCES	the community's perceptions of the types and levels of services which most appropriately address their expressed concerns.
SERVICE UTILIZATION	the consumption and patterns of use made of community-based health and related services.
SOCIO-ECOLOGICAL APPROACH	an approach to the provision of services that recognizes the "inextricable link between people and their environment.... the philosophy encompasses every factor that may affect health recognizing that health-improving activities range much further than the provision of health services. Poverty, nutrition, land tenure, irrigation and urbanization, for example are seen in part as health problems."[30]
STRUCTURAL INDICATOR	"a type of operations indicator that describes the type and amount of resources [used and linkages required] by a health system or organization to deliver programs and services."[31]
STRUCTURES	the various resources and linkages/relationships required to deliver services.
TEAM	"group of persons who share a common health goal and common objectives determined by community needs, to which the achievement of each member of the team contributes, in a coordinated manner, in accordance with his/her competence and skills and respecting the functions of others."[32]
TECHNOLOGY	"the drugs, devices, and medical and surgical procedures used in medical care and the organizational and supportive systems within which such care is provided."[33]

30 Canadian Public Health Association (1990). *Community Health - Public Health Nursing in Canada: Preparation and Practice.*

31 Alberta Health (1995). *Evidence-Based Decision Making: A Guide to Using Indicators in Health Planning.*

32 World Health Organization Technical Report Series No. 717. Geneva, 1985 cited in Abelson J. and Hutchison, B. (1994). *Primary Health Care Delivery Models: Review of the International Literature.* McMaster University Centre for Health Economics and Policy Analysis Working Paper 94-15.

33 *Ibid.* Canadian Public Health Association.

APPENDIX B

COMMUNITY HEALTH NEEDS ASSESSMENT INDICATORS

Much work on population health indicators has been undertaken in Canada in recent years. The indicators presented in this study are based upon the work of the Population Sub-Group of the Edmonton Health Information Network[34]. They are consistent with the work of the Working Group on Community Health Information Systems and S. Chevalier et al.[35], National Task Force on Health Information[36] and the Community Health Information System Working Group of the National Health Information Council and Alberta Health[37]. In the following pages, community health needs assessment indicators are presented under the following headings:

Population Health Needs

- Demographic
- Health
- Aberrations from Health
- Determinants of Health - Individual
- Determinants of Health - Societal

Community Concerns and Preferences

- Perceptions of Priority Needs and Service Preferences

Community Capacity

- Human, Capital, Technical and Financial Resources
- Service Availability and Utilization

An attempt has been made to propose indicators which emphasize the positive as well as negative aspects of health and which incorporate what is known about the determinants of health. In addition, indicators involving public concerns and preferences and community capacity have been included to enable consideration of these factors in the planning phase.

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34 Edmonton Health Information Network (1995) *Health Information for Planning and Evaluating the Delivery of Health Services*. Edmonton: Healthcare Quality and Outcomes Research Centre, University of Alberta.

35 Working Group on Community Health Information Systems and S. Chevalier, R. Choinière, M. Ferland, M. Pageau and Y. Sauvageau (1995). *Health Status Indicators: Definitions and Interpretations*. Ottawa: Canadian Institute for Health Information.

36 National Task Force on Health Information (1991). *Health Information for Canada*.

37 National Health Information Council and Alberta Health, Community Health Information System Working Group (1994). *Community Health Organizations: The Systems and Information that they Require to Make a Difference.*

Application Considerations

All needs assessment indicators are preliminary and should be viewed as a warehouse from which to select indicators relevant for particular purposes and particular jurisdictions.

Three potential applications of the indicators are proposed: (a) ongoing monitoring and comparison across jurisdictions; (b) research to develop a greater understanding of health determinants and health dynamics in the community; and (c) evaluating CBHSs and other community initiatives which have been designed and implemented to influence the population's health status.

Because the health system (of which CBHSs are a part) represents only one contributor to improvements in population health status, using the health determinant and health status indicators to evaluate the performance of the health system is problematic. These population health indicators are more appropriately viewed as measures of the performance of society as a whole. In some cases, there may be a direct link between CBHSs and a population health outcome (e.g., control of measles through an immunization program). In these instances, direct evaluation of the population health impact can be undertaken.

The identification of characteristics such as geography, socio-economic status, gender and special sub-groups enables the study of variation across groupings of the general population.

Some overlap exists amongst the five categories of indicators. This has been intentional to demonstrate the different ways in which the indicators may be used. *For example, measuring the proportion of regular smokers might be used to do the following:*

Identify particular groups that are at risk according to selected characteristics (e.g., gender, age, socio-economic status);

Compare trends over time and amongst different geographic locations;

Assist with setting goals and objectives related to smoking levels, and assessing progress;

Assist with program/strategic planning.[38]

It is important to acknowledge the many pragmatic problems associated with the collection, analysis and application of these indicators (i.e., timeliness, accuracy, availability, fragmentation and duplication of existing data and data sources). For example, census track data rarely conform to the boundaries of CBHSs catchment areas; provincial and national survey results are often dated by the time they are released; many data elements potentially useful for planning are not well developed; and standard forms often used for collecting data (e.g., surveys) are not appropriate for high risk target groups due to factors such as transiency, lack of telephone services and high illiteracy rates.

38 Ibid. Edmonton Health Information Network.

DEMOGRAPHIC INDICATORS				
DIMENSION	**INDICATOR**	**WHAT DOES IT MEASURE?**	**COMMENTS**	**DATA SOURCE**
Population Growth and Distribution	Total population counts	Number of people in a particular geographic area for some time period. Often used as denominator for rates.	Highly reliable. Availability can be a problem if census information is not available. Estimates and projections can be generated through a variety of techniques, but the user must be aware of the underlying assumptions.	Federal census, municipal census, projections from census information or other data (tax filers)
	Age sex structure (pyramid)	Distribution of age and gender	Not all pyramids have the same number of age groups, particularly at the older age groups. % over all bars should equal 100%.	Federal, municipal census
	Sex ratio	Distribution of population	Sex ratio varies by age.	Federal, municipal census
	Dependency ratio	Distribution of population	Different definitions for working age have been used over time. Child and elderly dependency ratio.	Federal, municipal census
	Population density	Distribution of population	Subject to bias due to boundary changes.	Census, user generated
	Rate of natural increase	Population growth (excess of births over deaths)	Used as a point of reference.	Census, user generated
	Doubling time indicator	Population growth (time required for population to double in size)	Used as a point of reference.	Census, user generated
	Mobility	Length of time at particular address; gives introduction of transience		Census

DEMOGRAPHIC INDICATORS ~ (Continued)				
DIMENSION	**INDICATOR**	**WHAT DOES IT MEASURE?**	**COMMENTS**	**DATA SOURCE**
Component Measures - Fertility	Crude birth rate (CBR)	Count of births over the total population	A crude measure that does not adequately identify the population at risk in the denominator.	Federal or municipal census and vital statistics data
	General fertility rate	Count of births over the female population aged 15-49	A better measure than CBR for fertility, but does not take into account age structure. Need to know female population aged 15-49. Cultural differences useful for planning.	Census data, vital statistics
	Age-specific fertility rates	Count of births by age over the population eligible by age and gender	A period or cross-sectional measure. Can be summed to TFR.	Census data, vital statistics
	Total fertility rate (TFR)	Average number of children a woman can expect to bear	A period or cross-sectional measure. A TFR of 2.1 is considered necessary for replacement.	Sum of age-specific rates
	Cohort fertility measures	Cohort or generational measures of fertility	Data for recent cohorts usually non-existent. Can be more intuitive than a period measure.	Census, vital statistics (historical data)

DEMOGRAPHIC INDICATORS ~ (Continued)				
DIMENSION	**INDICATOR**	**WHAT DOES IT MEASURE?**	**COMMENTS**	**DATA SOURCE**
Mortality	Crude death rate	Number of deaths over the total population	Not refined - does not adequately identify the population at risk in the denominator.	Census, vital statistics
	Age-specific death rate	Number of deaths by age over the total population in those age groups	More refined than the crude death rate, but not cause specific. Used in lifetable analyses.	Census, vital statistics
	Cause-specific death rate	Number of deaths by cause of death over the total population at risk	Causes of death that can be prevented or are medically overdue are of most relevance; occurrence of sentinel events useful to identify system failures. Small numbers can be exaggerated. Used in multi-decrement lifetable analyses.	Census, vital statistics
	Standardized mortality rate under 65 years	Removes the effect of age structure on the death rate	Standardization permits comparisons among areas and/or across time.	Census, vital statistics, user generated
	Life tables	A population subject to age-specific death rates is observed in a particular period	Treatment of older ages and first year of life differs across lifetable methodologies. Various types exist. Can be used for more than studying mortality.	Published by Statistics Canada. Can also be generated by users
Migration	Net growth due to migration	Growth due to migration	Difficult to get data for migration by age and sex.	Census, tax files, health care registration, survey

HEALTH INDICATORS

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Overall Health	Infant mortality rate	Proxy measure for the health of the population	Easily calculated. It may be useful to use the perinatal mortality ratio in future.	Census data and vital statistics data
	Life expectancy at birth	Proxy measure for the health of the population, mean length of life	Need to be aware of the assumptions underlying the method chosen to calculate life expectancy. Accuracy may be an issue with small population numbers.	Census data and vital statistics data
	Life expectancy free of disability	Helps to reflect the increasing importance of chronic disease, mean duration of life free of disability	Rarely measured, as required disability data are not available. Usual Canadian reference used is Wilkins, Chen and Ng, 1994.[39]	Census data, Health & Activity Limitation Survey
	Proportion of population with at least one health problem	General indicator of health status of population	Recall bias may be a problem. Underestimation of health problems is higher among men than among women.	Survey
	Subjective assessment of health using a rating scale	Subjective assessment of all aspects of health	Good reliability for the question “Do you consider your health to be excellent, good, fair, or poor?”. Some comparative data are available as the question has been asked on previous surveys.	Survey (Has been asked on the National Health Promotion Survey)

39 Wilkins, R., Chen, J., and Ng, E. (1994). Changes in health expectancy in Canada from 1986 to 1991. In Mathers, C.D., McCallum J., Robins, J.M. (Eds). *Advances in health expectancies.* Canberra: Australian Government Publishing Service (in press).

HEALTH INDICATORS ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Overall Health *continued*	Q of L of Chronically ill (scale)	Reflects health of a subgroup within the population	Not available at a population level.	Census and survey
	Employment rate	Proxy for economic independence	Reliable - but must be aware of the methodology used.	Labour force survey
	% by education level attained	Proxy measure for health potential		Survey
	Income (average, median, distribution)	Proxy measure for health potential	Interpretation of measures is often controversial.	Census, tax filer information (Statistics Canada)
Physical Health - Growth and Development	Birthweight (average, % LBW)	Risk to newborn, mothers nutritional status	Reliable, and comprehensive data set.	Vital statistics (birth file)
	Weight for age	Early growth and development	Interpretation of growth charts can be problematic for selected subgroups in the population.	Growth charts
Physical Fitness	Step-test results	Cardiovascular and musculoskeletal fitness		Survey
	Task performance tests	Coordination, strength		Survey
	Absence of illness	Indication of ability to withstand challenge to health		Survey
Somatic Risk Factors	Body mass index	% body fat	May be bias due to self-report.	Survey
	% with high blood pressure	% with lower health potential and risk to cardiovascular health	Varies with self-report and actual measurement.	Survey (e.g., Heart Health Survey)

HEALTH INDICATORS ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Somatic Risk Factors *continued*	Serum cholesterol levels	Cardiovascular health risk		Survey
	Immunization rates	Immune status	Very reliable for childhood immunizations. Information for adult population is not available in electronic format.	Immunization information systems
Social Health - Interpersonal Contacts	Frequency of visits with friends and relatives	Aspects of support that might be used	Interpretation depends on other variables.	Survey
Social Resources	Quantity and quality of social ties and networks	Support network adequacy		Survey
Role Functioning	Adjustment to parenting role	Capacity to perform social role	Measures not readily available. Very difficult to design a measure that would be acceptable given varied values and beliefs.	Survey
Activities of Daily Living	Feeding, dressing, bathing, meal preparation, etc.	Capacity to perform social roles and tasks	Some validated scales exist. Instruments often biased toward the very dysfunctional and therefore do not show good discrimination in the general population.	Survey (Sickness Impact Profile, Activities of Daily Living)
Other	- Level of health knowledge - Level of health skills - Frequency of self-help activities - Frequency of preventive behaviour	Potential to respond to health challenge		Survey (the federal Health Promotion surveys done in 1985 and 1990, and the SF-36 questionnaire address some of these measures)

HEALTH INDICATORS ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Mental Health	Ratings of: - Self-esteem - Sense of coherence - Positive self-concept - Perceived control of the intended outcomes of actions - General positive affect - Ability to control behaviour - Life and coping skills	Potential to respond to health challenge. Degree to which challenges to health are being met adequately		Survey
	Cognitive functioning tests	Cognitive functioning ability		Survey

INDICATORS OF ABERRATIONS FROM HEALTH

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Level of Population Health	Crude death rate	Annual number of deaths per 1,000 population. Measures mean level of health of population	Lack of reliability for comparisons among populations. Crude rates react to significant and rapid changes in the health status of the population (e.g., epidemic, natural catastrophe).	Census data, vital statistics
	Standardized death rate	Annual number of deaths per 1,000 population which would be observed in the population if it had the same age composition as the reference or "standard" population. Measures mean level of health	Standardized rates are dependent on the standard population chosen. Standardized death rate is the weighted average of age at specific death rates.	Census data, vital statistics
	Life expectancy at birth	Mean length of life. Level of health of the population		Census data, vital statistics
	Life expectancy in good health	Mean duration of life in good health	Varying definitions of "good health" make data collection difficult. As well data are not readily available.	Survey, census data
	Potential years of life lost	Indicator of premature mortality	The upper age limit chosen is somewhat arbitrary.	Vital statistics, census data
Health Problems	Prevalence of a risk factor	Proportion exposed to a controllable factor involved in the emergence or worsening of a health problem (e.g., alcoholism, air pollution). Estimate of the fraction of the population whose future health could be improved	Prevalence can only be ascertained by survey.	Survey, census data

INDICATORS OF ABERRATIONS FROM HEALTH ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Health Problems *continued*	Incidence rate of a disease	Average number of new cases for a particular disease per year, per 10,000. Gives an indication of vulnerability of the population to the disease.	Few sources of data available. The detection of new cases is often incomplete.	Surveys, Disease registries (e.g., Cancer registry), Census data
	Prevalence rate of a disease	Proportion of the population having a disease for a particular timeframe. Indicates the proportion of the population that requires specific support	Difficult to determine prevalence, as comprehensive case finding is rare. Duration, frequency, and seriousness of disease influence this measure.	Surveys, Hospitalization data, Census data
	Hospital morbidity rate	Number of hospital separations per year by cause (also number of days by cause). Level of severe morbidity by cause	May be influenced by factors exogenous to health status (e.g., availability of care, physical and financial accessibility to care). Often used to rank health problems on the basis of their impact on average health of the population.	Hospitalization data, Census data
	Cause-specific death rate	Measures extent of health problems linked to the development of certain pathological conditions, or brought on by outside causes	Differences in classification of cause of death for different timeframes or locations can bias the measure, as can selecting a single cause when the death was attributed to more than one cause. If the rate is standardized, then comparisons across time and place may be made.	Vital statistics, Census data

INDICATORS OF ABERRATIONS FROM HEALTH ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Health Problems *continued*	Probability of dying from a specified cause	Measures relative importance of a specific health problem, as seen in terms of its contribution to the total deaths ultimately experienced by members of a cohort		Vital statistics
	Cumulative risk of dying from a specified cause	Probability of dying before a given time in the absence of all other causes of death. Measures impact of specified health problems considered over the entire life cycle		Vital statistics Census data
	Prevalence of disability by cause	Frequency of types of disability by cause for a particular timeframe	Limited data available. Also definitions of "disability" may vary. Sometimes used to assess the impact of prevention programs.	Vital statistics Census data
	Fraction attributable to a risk factor	Proportion of cases of disease, disability, or death which may be attributed to exposure of the population to a given risk factor	Incomplete information. The causal relationship may not be established for a particular risk factor or disease. May be used to assess the impact of previous measures designed to defend the population from exposure to the risk factor, or to eliminate the health damaging effects.	Vital statistics Census data

INDICATORS OF ABERRATIONS FROM HEALTH ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Health Problems *continued*	Incidence of major notifiable diseases / Incidence of notifiable diseases requiring vaccination	Ratio of new cases of notifiable disease to the total population/ratio of NDs requiring vaccination to the total population. Latter provides indication of vaccination coverage	Data represent events not individuals. Rate increases/decreases must be interpreted in light of changes in reporting practices, specificity and sensitivity of testing, or the definition of the disease.	Notifiable disease reports Census data
Indicators Specific to Certain Stages of the Life Cycle	Infant mortality rate	Ratio of deaths among infants under a year old to the number of live births. Indication of the level of economic and social development	Definition of live birth may not be uniform. May identify sectors of the population with poorer health.	Vital statistics
	Perinatal mortality rate	Annual number of stillbirths and early neonatal deaths per 1,000 total births. May measure standards of care as well as general health of the population	Usefulness of data is dependent upon quality (e.g., experience of certifying physicians and use of autopsy examination results). A decrease in mortality from a given cause may not indicate a better state of health, but progress in methods used (e.g., ultrasound to detect fetal problems).	Vital statistics
	Early neonatal mortality rate	Ratio of deaths in the first week of life to all live births for a given year. Indication of level of perinatal care	Data are readily available.	Vital statistics
	Incidence of low birthweight infants	Percent of live-born infants whose birthweight is less than 2,500 grams. In part, reflects mothers' health	Data are readily available. Indicator varies with health status and with quality and quantity of care available.	Vital statistics

INDICATORS OF ABERRATIONS FROM HEALTH ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Indicators Specific to Certain Stages of the Life Cycle *continued*	Life expectancy by marital status	Measures mean length of life by marital status	Data are readily available. Indicator does not take into account the marital history of individuals.	Vital statistics Census data
	Excess male mortality index	Ratio of male death rate to female death rate. Shows the extent of sex differentials		Vital statistics Census data

INDICATORS FOR DETERMINANTS OF HEALTH - INDIVIDUAL

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Socio-economic status	Income level, educational level, occupation	Socio-economic status (related to health status indirectly through nutrition, living and working conditions, health knowledge, etc.)	Self-report bias.	Survey Census data
Personal Health Practices	Smoking - Smoking prevalence, average number of cigarettes per day, number of years smoking	Smoking behaviour, as indicator of health risk	Self-report bias. Survey data underestimate the actual number of cigarettes sold.	Survey Census data
	Drinking - Prevalence of alcohol use, average number of alcoholic drinks per week	Drinking behaviour, as indicator of health risk	Self-report bias. Current research suggests a curvilinear relationship with health.	Survey Census data
	Nutrition - % following food guide, % eating breakfast, % reading food labels, % breastfeeding, % calories from fat, body mass index	Nutritional status as indicator of health potential. Body mass index, is an indicator of health risk	Self-report bias, also lack of knowledge re specific nutrient intake. For body mass index, self-report bias is well-known, both for height (over-estimate) and weight (under-estimate).	Survey Census data For body mass index, clinical measures may be used
	Physical activity - prevalence of leisure time physical activity (LTPA), duration of LTPA	Physical fitness, as indicator of health potential	Self-report bias.	Survey Census data
	Illicit drugs - lifetime use, prevalence of current use	Indicator of health risk	Self-report bias.	Survey Census data
Disease and Injury Prevention	Blood pressure (BP) - proportion having annual BP check, prevalence of “ever” being diagnosed with high BP	Early detection behaviour, elevated BP indicator of health risk	Self-report bias.	Survey Census data

INDICATORS FOR DETERMINANTS OF HEALTH - INDIVIDUAL ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Disease and Injury Prevention *continued*	Women's cancer prevention - proportion having regular PAP smear, proportion doing regular breast self-exam	Early detection behaviour re cervical cancer and breast cancer	Self-report bias.	Survey Census data
	Sexual health - Number of sexual partners, frequency of unprotected sex, knowledge rating of STD prevention	Sexual practices, as indicator of health risk	Self-report bias.	Survey Census data
	Dental health - % dentate, DMF index, toothbrushing frequency, % accessing regular dental care	Preventive health behaviour. DMF index is a general indicator of dental health status	Self-report bias. Criteria for measuring decay may vary.	Survey Census data
	Injury control - frequency of seat belt use, frequency of helmet use	Preventive behaviour	Self-report bias.	Survey Census data
	Occupational injury - frequency, type and severity of worker related injury	Preventive practices and worksite conditions		Workers Compensation Board claims Insurance claims
Context for Personal Health	Proportion living alone	Indicates increased risk of social isolation, mental/physical health risk		Survey Census data
	Stress - Perceived stress level, % ever having contemplated suicide	Aspects of mental health status of the population	Self-report bias. The 'degree' of contemplation (casual versus intense) may not be assessed.	Survey
Genetic/Biologic Factors	(recognized as a large contributor to health, but no indicators found)			

INDICATORS FOR DETERMINANTS OF HEALTH - SOCIETAL

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Physical Environment	Persons/unit area	Population density	Useful for large geographic areas, less so in cities (density varies less). Reflects housing situation somewhat.	Census data, municipal land area data
	Proportion of land assigned specific use: land zoning	Land use	Reliable; little value as an index of individual health status; may reflect likelihood of occupational disease. May be an indirect indicator of socio-economic status (SES).	Municipal planners, government
	Housing age, quality (state of repair), size	Housing characteristics	Helps to assess SES of community residents.	Census, municipal planning, tax assessment
	Workplace location	In/out of community; In/out of home	Where zoning prohibits residential work, reliability may be decreased. Provides index of mobility. May reflect changes in work practice.	Survey
	Air quality measures	Composition of local air, especially regarding pollutants	Where measured, reliable; measures often episodic and site specific. Strong determinant of asthma, emphysema, and other chronic respiratory disease.	Environmental monitoring agencies of provincial government
	Water quality measures	Composition of local water, especially regarding contaminants, micro-organisms	Reliable, valid for drinking water. Surface water quality less often measured, but important for irrigation, recreation purposes; monitoring is standard public health practice.	Provincial or municipal government

INDICATORS FOR DETERMINANTS OF HEALTH - SOCIETAL ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Physical Environment *continued*	Climate - average temperature, rainfall, hours of sunshine	Climate severity index	Somewhat subjective, but provides relative position. Marginal association with specific illness: frostbite, etc.	Environment Canada
	Landfill Use, Hazardous Waste Sites, Use of Hazardous Materials	Measures attitudes to waste management and indicates amount of waste produced	Hazardous waste sites may be unrecorded.	Municipalities, prov. & federal government environmental agencies
	Pests - number of infestations	Presence/absence of significant numbers of pests (rats, mice, etc.)	Measurement unreliable. Degree of control is an index of potential health problems in a community.	Self-report, Public health agencies (e.g., food monitoring)
	Recreational Facilities - number, accessibility	Presence/absence of community recreational facilities (pools, rinks, etc.)	Measurement reliable, but assessment of use would be problematic. General indicator of SES of a community.	Local parks and recreation authority
	Telephone access	Coverage re: one mode of communication	General (crude) indicator of SES. Not directly related to health.	Telephone company
	Use of bus/rail/air service, special transport for handicapped	Use of transport options	Measurement of service valid, use assessment reflects only those who use it, not those who may need it but can't or won't use it. Both direct and indirect effects on health. Presence of disabled adult transportation service is an indicator of access to services for handicapped. Utilization statistics may help assess need	Municipal planners, economic authority, transportation authority

INDICATORS FOR DETERMINANTS OF HEALTH - SOCIETAL ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Physical Environment *continued*	Amount, condition, and maintenance practices re roads, bridges, public lighting, snow removal, etc.	Quality of transport infrastructure	Poor index of individual health. More an index of overall social affluence and priority setting.	Municipal and provincial transportation departments
	Incidence of motor vehicle accidents	Number, type, and severity of motor vehicle accidents	Indicator of frequency of accidents; probably highly reliable for accident cases (where implemented), but for lesser accidents, probably quite unreliable.	Municipal policy
Demographic Indicators	Population by age and sex (pyramid)	Number of people in each age-sex group, residing in a given area	Generally reliable - best just after a census. Less reliable in areas of high migration. Less accurate for subgroups, e.g., homeless. Fundamental to the description of a population and as a denominator for many health indicators.	Census data
	Population growth rate	Rate of change in population size	Requires accurate population estimates at two points in time. Permits estimates of future population size, thus aids planning.	Census data Population projections
	Total Fertility Rate (TFR)	Total number of children women can expect to bear in a lifetime	Valid index for comparisons among populations. May be of questionable usefulness for small subgroups in the population. Good descriptor of overall fertility. Used for population planning, pre- and post-natal services.	Census data Vital statistics

INDICATORS FOR DETERMINANTS OF HEALTH - SOCIETAL ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Demographic Indicators *continued*	Age-specific birth rate, births by mother's education level	Live births by age of mother. Live births by educational level of mother	Reliability and validity in part a function of the accuracy and timing of census data. Used to identify risk groups, to develop family planning programs, pre and post-natal programs, and to document trends.	Census data, vital statistics
	Life expectancy (at age x)	Mean length of life (at age x)	Relates to population groups, not individuals. Supplies no information concerning morbidity.	Census data
	Percent of population born outside of Canada	Aspect of population composition. Used to account for variation in education, income, etc.	The country of birth does not equate to a homogeneous cultural/social experience. Useful for planning program delivery to immigrants. If sub-divided by origin may provide data about likelihood of specific illness.	Census data
Socio-economic Indicators	Proportion of single-parent families with children under 18	As stated. Proxy measure of poor socio-economic conditions	Used to help determine size of high risk groups.	Census data
	Income level, income distribution, sources of income	Proxy measure for socio-economic status	Definition of income varies. Media income may be more useful measure than mean income. May relate to personal, family or household income.	Census data, surveys, tax filer data

INDICATORS FOR DETERMINANTS OF HEALTH - SOCIETAL ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Socio-economic Indicators *continued*	Incidence of low income	As stated relative to a given population	Definition of low income can vary across place and time. Does not take into account the "near poor" or "low wage earners" who may have very similar living conditions. Identifies potentially high risk groups.	Census data, surveys
	Proportion of population receiving welfare	As stated relative to a given population	Data do not include all who are eligible. Definitions vary across time and place. Can calculate a disadvantage index. Identifies potentially high risk group.	Census data, surveys, municipal and provincial welfare data
	Unemployment rate	As stated, relative to given population. Key socio-economic indicator	Definition of unemployment varies. Useful for planning assistance programs and economic development programs.	Labour force survey data
Educational Attainment	Percent of eligible persons who attend school	Access and coverage for eligible population	Can help to identify poorly educated groups.	Education department School boards
	Average formal educational level	Proxy measure for health potential		Surveys Education department School boards
	Percent of population 15 years and older with < 9 years of education	Indicator of socio-economic status	Indication of likelihood of functioning effectively in society.	Surveys

INDICATORS FOR DETERMINANTS OF HEALTH - SOCIETAL ~ (Continued)

DIMENSION	INDICATOR	WHAT DOES IT MEASURE?	COMMENTS	DATA SOURCE
Educational Attainment *continued*	Literacy rate (basic and functional)	As stated	Definitions must be specified before comparisons can be made. A crude educational index. Used to determine the proportion of the population with insufficient reading and writing skills to be able to function in society.	Surveys, census data
	Percent of eligible children in kindergarten/day care	As stated. Proxy measure for health potential	Data difficult to obtain.	Surveys, school enrollment data
Nutrition	Incidence of food poisoning, regulatory compliance rate of food premises	Safety of food supply	Incomplete data.	Provincial lab, health units
	Food bank use	Food supply accessibility. Measures number of individuals/families accessing food bank	Few demographic data available on selected population. General indicator of societal need. Useful in assessing trends and relative changes in social circumstances.	Food bank and other agencies

PERCEPTIONS OF PRIORITY NEEDS AND SERVICE PREFERENCES			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Perceptions of Priority Health Needs	Expressed relative levels of concern regarding health issues, including: - Major causes of death, disease and injury - Social environment - Physical environment - Health related lifestyle issues - Equity issues - Economic issues - Issues relating to life stages - Health service delivery	Responses will reflect level of awareness of general health issues	Local survey Focus sessions Interviews Informal feedback Provincial and national surveys (e.g., Canada's Health Promotion Survey)
Preferred Services to Address Needs	Type of service desired to address perceived needs, e.g., - Advocacy - Counselling - Education - Enforcement - Intervention	Bias towards existing services/facilities	Local Survey Focus Sessions Interviews
	Type of service providers preferred to address perceived needs, e.g., - Self-management - Informal providers (volunteers, friends, etc.) - Formal providers by type (doctors, nurses, assistants, indigenous workers, etc.)	Bias towards the familiar types of service providers	Surveys Focus sessions Interviews
	Level of service	Useful for planning services	Surveys, focus sessions, interviews

HUMAN, CAPITAL, TECHNICAL AND FINANCIAL RESOURCES			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Human Resources	Types of formal CBHSs providers available in or accessible to the community	Indicates the range of human resources available to meet health needs; suggests service gaps	Professional registries Survey Organizational records
	Comparison of provider: population ratios with other jurisdictions by type of CBHSs provider	Indicates over- or under-servicing by provider type	Census data Organizational records
	Number of registered community service volunteers	Useful for service planning	Volunteer registries
	Types of related service providers in other organizations/departments available to the community	Indicates range of human resources available and suggests service gaps	Organizational records
Capital and Technical Resources	Presence and condition of necessary facilities (health and other)	Useful for capital planning	Audit Survey
	Presence and condition of necessary diagnostic and treatment equipment		Audit Survey
	Availability and quality of technical supports	Examples are on-line computers, libraries, tele-video, etc.; important for improving consumer access to health information	Audit Survey
	Availability and adequacy of transportation systems (e.g. public and handicapped)	Indicator for service accessibility	Survey
Financial Resources	Comparison of funding levels with other jurisdictions, by type of service (i.e., health and other services)	May suggest over- or under-servicing	Survey

SERVICE AVAILABILITY AND UTILIZATION			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Availability of Services	Range and levels of CBHSs available to the community	See section 3.3 in main document for discussion of "core" CBHSs	Organizational directories
	Availability of Institutional health services: - Acute care - Long-term care - Specialty (cancer, rehabilitation, TB) (comparison of beds/1,000 with other jurisdictions; service procedures by type of service)		Hospitalization data Provincial data bases Organizational records
	Availability of related community resources, e.g., - Support and self-help groups - Drop-in centres - Food banks - Shelters (women, homeless, youth) - Social services - Employment centres - Courses (stress management, bereavement, etc.) - Spiritual support - Recreation facilities - Volunteer associations - Day cares		Library registries Community directories Community centres
	Assessment/intervention waiting lists by type of service in: - Health agency - Other community organizations	Indicative of met/unmet demand	Organizational records Provincial data bases

SERVICE AVAILABILITY AND UTILIZATION ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Patterns of Service Utilization	Service utilization by demographic variables (e.g., age, gender, race, SES) - Health services - Other related community services	Suggests areas of met/unmet need and service practice problems; however, only possible to obtain for those currently provided Useful for service planning for vulnerable/high risk groups	Organizational records Provincial data bases
	Service utilization by problem/condition	Suggests areas of met/unmet needs and service practice patterns	Organizational records Provincial data bases
	Service utilization by type of service	Suggests areas of met/unmet needs; service practice patterns	Organizational records Provincial data bases

APPENDIX C

COMMUNITY-BASED HEALTH SERVICES PLANNING AND EVALUATION INDICATORS

CBHSs PLANNING AND EVALUATION INDICATORS

The planning and evaluation indicators are organized by outcome, process, and structure. In the comments section of the process and structure indicator charts, the following codes are used to reference the current status of the indicators:

EMP	empirical evidence for indicator through quasi-comparative or comparative studies (i.e., these indicators have been found to be linked to outcomes)
EXP-LR	experiential support for indicator as found in descriptive studies of literature reviews
EXP-SV	experiential support through site visits
P-SV	proposed during site visits
P-LR	postulated in informed opinion articles in literature review
P-ST	postulated by the study team

Application Considerations

- ❒ The indicators are of two types: quantitative and qualitative. Quantitative indicators involve either numbers, rates, ratios or percentages. Qualitative indicators may be either (a) *yes/no* or *presence/absence* measurements or (b) those requiring comparative analysis involving pre-determined audit criteria. When qualitative indicators are involved, specific definitions will need to be established for determining when a requirement has been met.

- ❒ The indicators presented are a beginning attempt to identify data elements useful in the management of CBHSs. They will need to be refined over time as they are applied in various jurisdictions.

- ❒ The number of indicators potentially relevant for the planning and evaluation of CBHSs are many. Those presented here have been selected based upon the particular emphasis of this study. For example, the process and structural indicators primarily involve human resources and organizational characteristics for which there is some indication of a relationship with desired CBHSs outcomes.

SERVICE EFFECTIVENESS: HEALTH STATUS (Attributable to Program/Service)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Quality of Life	Consumer perception of increased quality of life attributable to program/service		Survey
Functional Ability	Percent of individuals within program/ service realizing significant increase in ability to function in: - self care (activities of daily living) - productivity (paid/unpaid work and school) - leisure		Scales Survey
Disability	Percent of individuals within program/service realizing significant decrease in disability		Scales
Morbidity	Percent of individuals within program/service for whom significant reduction in disease or illness is achieved		Survey Scales
Mortality	Number of deaths by cause of death over the total number of individuals included in a program or service	Not often applicable for CBHSs May be difficult to use data for CBHSs evaluation, as the underlying or associated reason for death may not be coded	Vital Statistics Census

SERVICE EFFECTIVENESS: RISK REDUCTION (Attributable to CBHSs)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Personal Health Practices	Demonstrated improvement in personal health practices/behaviours in CBHSs recipients, e.g., - smoking - alcohol consumption - nutrition - physical activity - illicit drug use		Survey
	Demonstrated improvements in preventive behaviours in CBHSs recipients, e.g., - blood pressure checks - cancer prevention - sexual health practices - dental health - injury control		Survey
Physical/Social Environment	Evidence of action to identify and resolve physical and social threats to health		Service records
	Percent of identified physical environmental health risk situations resolved through CBHSs	May need to be undertaken with other organizations/departments	Service records
	Demonstrated compliance with environmental health control standards specified in legislation/regulation or provincial standards which are under the mandate of CBHSs organization	Types of controls which might fall under CBHSs organizations include day care safety standards, food and water safety standards, municipal waste management	Service records
	Percent of identified problematic social situations resolved through CBHSs		Service records
	Presence of local healthy public policies and practices attributable to CBHSs	Examples include public no-smoking areas and mandatory bicycle helmet by-laws	Municipal by-laws

SERVICE EFFECTIVENESS: INDIVIDUAL/COMMUNITY CAPACITY (Attributable to CBHSs)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Social Resources	Improvement in frequency and quality of visits by service recipients with friends and relatives		Survey
Coping	CBHSs consumer rating of increased ability to cope with health problem		Survey
Health Knowledge	Demonstrated improvement in health knowledge and attitudes in CBHSs recipients		Survey
Health Skills	Demonstrated acquisition/use of health skills in CBHSs service recipients and informal care providers		Survey

SERVICE EFFECTIVENESS: RELEVANCY			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
CBHSs Relevancy	CBHSs presence in responding to and collaborating with the community to address health incidents and issues	Examples of community incidents involving physical and psycho-social challenges to health include natural disasters, incidents of violence as well-as ongoing service priorities	Service records
	Public perception of timeliness, quality and appropriateness of CBHSs response to community health incidents/issues		Survey
	Other community organizations' perceptions of timeliness, quality and appropriateness of CBHSs response to community health incidents/issues		Survey

SERVICE EFFECTIVENESS: CONSUMER SATISFACTION			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Consumer Satisfaction with Service Outcomes	Consumer satisfaction with service outcomes		Survey Interview
	Reported increase in health and well-being attributed to CBHSs by consumers		Survey Interview
Consumer Satisfaction with Service Processes and Structures	Number/percent of justified formal complaints		Survey Interview
	Satisfaction with program/service accessibility		Survey Interview
	Satisfaction with access to provider of choice		Survey Interview
	Satisfaction with progress through service processes, e.g., service entry, referral to others		Survey Interview
	Satisfaction with quality and appropriateness of services		Survey Interview
	Perception of “user-friendliness” of CBHSs facility(ies)	e.g., Was the environment non-threatening? Were services conveniently located? Was parking available? etc.	Survey Interview
	Perception of “user-friendliness” of staff	e.g., Were the staff approachable? Did the consumer feel understood?	Survey Interview

ECONOMIC EFFICIENCY			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Cost to Health System	Demonstrated efficiency through formal economic evaluation	May be beyond the capacity of most CBHSs organizations due to cost and research capabilities needed	Economic evaluation
	Use of most economically efficient processes demonstrated through studies undertaken elsewhere	Proxy for formal economic evaluation; requires knowledge of literature regarding cost-effective practices	Literature
CBHSs Costs	Absence of unnecessary service duplication	i.e., several providers providing similar services	Service records Survey
	Absence of unnecessary processes and paperwork	Examples include duplicate service entry and case history procedures and forms	Service forms and records Survey
	Unit cost comparisons with comparable jurisdictions per: - service - client/case - type of problem	May be difficult to assure that comparisons are among 'like' entities as definitions vary	Service and financial records Survey of other jurisdictions Provincial, federal or other standards
De-institutionalization	Number/percent of in-patients inappropriately institutionalized in jurisdiction		Hospital records Survey
	Number/percent of CBHSs clients for whom institutionalization was avoided		Service records Survey

EQUITY			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Universality	Percent of population "covered" by CBHSs		Provincial databases Organizational Mandate
	Presence of inclusive/absence of exclusionary eligibility policies and practices		Organizational Records Audit
Targeted services	Evidence of CBHSs tailored to address greatest health needs	Measures the extent to which proactive services are in place to meet identified priority needs	Documents
	Proportion of services delivered to vulnerable/ high risk groups, e.g., - Minorities - Immigrants - Natives - Rural residents - Disadvantaged socio-economic groups - Frail elderly	Enables comparison with population health needs data for determination of whether services are appropriately targeted	Service records
	Waiting times for assessment by level of health need		Service records
	Waiting times for treatment by level of need		Service records

COMMUNITY/CONSUMER EMPOWERMENT			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Community Empowerment	Public satisfaction regarding involvement in CBHSs policy development		Survey
	Percent of CBHSs programs/services with community member involvement in planning, implementation and evaluation		Records Minutes
	Number/percent of community members involved in organizational activities (e.g., fund-raising, volunteering)	Proxy measure of community's commitment to CBHSs	Records
	Extent to which other community organizations perceive partnership with CBHSs		Survey
Consumer Empowerment	Perceived level of control perceived in decision-making about personal health services		Survey Interview
	Consumer knowledge of: - health and its determinants - availability of service alternatives - service entry criteria and procedures		Survey

QUALITY OF WORKLIFE (Intermediate Outcome)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Provider Satisfaction	Provider satisfaction with quality of work environment		Survey Interview
Turnover Rates	Rate of staff turnover attributable to work environment		Survey Interview
Burnout Rate	Respite care "need" levels for informal providers		Survey

MANAGEMENT PROCESSES			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Effective and Efficient Management	Proportion of CBHSs goals/objectives achieved	P-ST Measures achievement of pre-determined standards and meeting of timelines	Organization/Agency records
	Compliance with national and provincial community health standards/guidelines	P-ST	Organization records
	Presence of orientation program	EXP-SV Need expressed for orientation to philosophy, objectives and approaches of community-based service delivery	Organization records
	Presence and application of effective performance evaluation systems	P-ST	Organization records
	Application of effective time management practices	P-SV	Audit, Records
	Presence of positive management culture and practices, e.g., - supportive leadership - ongoing feedback to providers - team autonomy - flexibility - controlled workloads - employer concern for providers - fair wages and benefits - involvement in decision making (membership on committees, opinions sought and valued) - status enhancement for informal providers (e.g., titles, badges, office space) - presence of continuing education opportunities - opportunity for growth	EMP, P-LR, EXP-SV	Survey

MANAGEMENT PROCESSES ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Strategic/Proactive Management	Evidence of comprehensive community health needs assessment including review/analysis of: - population health status - community concerns and service preferences - current community resources	P-ST	Organization records
	Presence of organizational vision and mission statements	EXP-SV, P-LR Importance of visionary leadership emphasized	Organization records
	Presence of goals and associated measurable objectives with specified action plans	P-ST Goals and measurable objectives should be demonstrably linked to priority health issues	Organization records
	Evidence of implementation of workplan	P-ST	Audit, Records
	Presence of policies regarding use of practice guidelines, where available	P-ST	Organization records
	Evidence of evaluation of CBHSs	P-ST Need for selectivity in choosing evaluation questions of most relevance to particular organization or program	Organization records
Fiscal Management	Evidence of operation within established budget	P-ST	Financial records

SERVICE DELIVERY PROCESSES			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Range of Services	Number, type and frequency of "core" CBHSs provided	P-ST see section 3.3 for discussion of "core" services	Service records Annual report
	Proportion of service time in each of the following areas: - Promotion - Prevention - Curative Services - Rehabilitation - Community Supports	P-ST	Service records
	Proportion of service time in population interventions* versus individual interventions	P-ST *Population-based services are those which are directed to the whole population or sub-groups of the population rather than to individual clients	Service records
Continuity of Care	Presence of a case coordinator assigned to each high risk client or family	P-LR High risk includes those requiring long-term or intensive services	Service records
	Client records are integrated across services and service providers (i.e., one record per client)	EXP-SV Preferably, provider notes should be listed chronologically, not by discipline. Effective controls to ensure confidentiality may be needed; in exceptional circumstances, individual records may need to be retained for sensitive services or circumstances.	Client records
	Evidence of continuity across organizations and sectors	P-ST based on effectiveness of models such as On Lok in the U.S.	Client records Survey
	High risk individuals are regularly monitored	P-ST	Service and client records

SERVICE DELIVERY PROCESSES ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Internal Coordination	Presence of single entry systems/processes	P-LR e.g., single referral form	Service forms and records
	Presence of inter-disciplinary assessment, placement and administrative processes	P-LR	Service forms and records
	Presence of interdisciplinary case conferences	P-ST	Service records Meeting minutes
Collaboration with Other Organizations	Perception of other community organizations regarding presence and effectiveness of collaboration	P-ST	Survey
	Proportion of CBHSs staff time spent interacting with other community organizations and departments	P-ST	Organization/service records Survey
	Evidence of shared: - Resources - Providers - Services	P-ST	Organization records
Access to Information	Presence of self-help information sources accessible to consumers	P-LR including computerized information data bases, video taped instruction, telephone help lines, information brochures, self-care protocols	Audit
	Consumers have access to their personal health file	P-ST	Organization policies Survey
Informed Consent	Informed consent policies in place and applied	P-ST	Organizational policies and records

SERVICE DELIVERY PROCESSES ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Choice of Provider	Absence of legislative and organizational barriers which inappropriately or unnecessarily limit choice of provider	P-ST	Legislation Organizational policies
Consumer/Provider Partnership	Percent of clients who receiving adequate information regarding risks and benefits of treatment options	P-ST	Survey Records
	Evidence of client involvement in selection and planning of intervention	P-ST	Survey
	Level of agreement between provider and consumer, regarding: - definition of problem - service objectives - service approach	P-ST Must be measured after intervention plan has been established	Records Survey
	Evidence of organizational policy establishing client right to choice of intervention, including non-intervention	P-ST	Records
	Evidence that services are adapted to values and unique needs of individuals and families	P-ST i.e., that linguistic, cultural, religious and gender sensitivities are accommodated as much as is feasible	Survey Service records
	Presence and consumer awareness of complaint/appeal procedure	P-ST	Organizational/program policies

SERVICE DELIVERY PROCESSES ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Evidence-Based Practice	Provider adherence to established practice guidelines	P-ST e.g., Canadian Task Force on the Periodic Health Examination[40]	Audit Performance evaluation
Appropriate Self-Care	Proportion of population engaging in preventive practices of demonstrated effectiveness	EMP - evidence exists to support certain self-management practices, e.g. breast self-examination, blood pressure monitoring	Survey
	Proportion of population with specific conditions practicing self-care treatments of demonstrated effectiveness	EMP - evidence to support self administration of medications, injections or IV treatments, TPN, dialysis, manipulation, exercises, ostomy care, dressings	Survey Interview Service records
	Proportion of clinic clients appropriately self-treating for minor conditions (e.g., headaches, colds, flu, injuries)	EMP	Survey
	Provision of structured self-care training programs	EMP Evidence to support educational programs for individuals with certain conditions, e.g., arthritis, asthma, diabetes, upper respiratory tract infection	Service records

40 Canadian Task Force on the Periodic Health Examination (1994). The Canadian Guide to Clinical Preventive Health Care. Ottawa: Minister of Suppy and Services.

SERVICE CATCHMENT			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Jurisdiction	Evidence of defined geographic territory	P-LR	Organization/Agency records
	Boundaries determined - considering natural markers - community preferences	EXP-SV	Organization records
	Community recognition of CBHSs as community entity	P-SV	Survey
Service Accessibility	Hours of operation conducive to client needs	EXP-SV, P-LR	Survey, focus groups, interviews
	Access to 24 hour emergency service	EXP-SV	Organization records
	Waiting times	P-LR	Program records
	Physical accessibility of facilities	P-LR, EXP-SV e.g., public transportation, accessibility for handicapped	Survey Audit
	Percent of clients for whom services are provided in location of choice	P-ST e.g., % of palliative care cases who wish to die at home are able to do so	Survey
	Presence and application of recall systems for high risk clients	P-LR	Service records
	Travel distance to service location	EXP-SV	Survey

HEALTH HUMAN RESOURCES			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Use and Support of Informal Providers	Ratio of CBHSs-affiliated volunteer to formal provider service hours	EMP Literature findings support use of volunteers for provision of care, health education, crisis intervention, and psychosocial support/counselling	Service records
	Proportion of clients whose primary health service provider is an informal provider (i.e. volunteer, family member, friend)	P-ST	Service records Survey
	Presence of appropriate and sufficient respite care options for family providers: - planned non-routine (e.g., vacation) - planned routine (e.g., once weekly relief) - unplanned/emergency	P-LR, P-SV	Survey Interviews
	Proportion of worksites within CBHSs geographical jurisdiction with support programs* for employees who have assumed informal provider roles	P-LR *e.g. Policies for leave time, flexible work schedules, financial benefits, information and referral services	Survey
Integration of Formal, Informal, and Self-care Providers	Presence of integration mechanisms	P-ST e.g., participation in case conferences, flow of information	Audit Organization records
Use of Indigenous Workers (where justified by service needs)	Ratio of indigenous to non-indigenous health care workers	P-ST	Organization records Survey
	Proportion of indigenous workers compared to proportion of indigenous people in jurisdiction	P-ST	Population statistics Organization records
	Type of services provided by trained indigenous workers. (e.g. community health representatives/aides)	EXP-SV, P-LR Support for provision of health promotion/education, advocacy, community development, outreach, care provision	Service records

HEALTH HUMAN RESOURCES ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Midwives	Proportion of pregnant population with access to midwifery service option	EMP related to positive birth outcomes/reduction in negative birth outcomes and user satisfaction	Survey Provincial/organization records
	Proportion of births in which midwife is primary caregiver	EMP related to positive birth outcomes/reduction in negative birth outcomes and user satisfaction	Provincial/Organization Records Vital Statistics
Nurse Practitioners	Proportion of population with access to CBHSs nurse practitioner	EMP related to quality and cost-effectiveness	Organization records Population statistics
	Physician : nurse practitioner ratio	P-ST	Organization records
	Proportion of clinical service hours provided by nurse practitioner versus physicians	P-ST	Organization records
	Presence of formal co-practitioner arrangements between physicians and nurse practitioners with clear role definitions	P-LR	Organization records
Other Alternative Providers	Ratio of formally trained professionals: technical assistants	Some EMP support for the use of trained substitute personnel in * dental (e.g. dental nurses) mental health, pharmacy, rehabilitation assistants	Organization records
	Proportion of salaried personnel possessing skills (trained) in more than one health services area, where appropriate (i.e., low staffing numbers exist)	No empirical evidence for or against the use of multi-skilled workers. Most desired multi-skills involve: nursing, laboratory, ECG testing, medical records, radiographic/ ultrasound technology, vision testing, audiometric testing, pulmonary function testing, respiratory therapy	Organization records

PROVIDER SKILLS			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Informal Providers	Provision of adequate training* for family/lay providers	EMP *i.e., in care management and techniques, and for own personal care/safety	Survey Interview
	Proportion of CBHSs affiliated volunteers adequately screened, selected and trained	EMP Evidence suggests the need for careful selection and training of volunteers	Survey Interview
Formal Providers	Proportion of formal providers who have received an orientation to CBHSs philosophy and service delivery approaches	EXP-SV	Organization records
	Proportion of CBHSs budget spent on professional development	P-ST	Financial records
	Proportion of formal health services training programs in province/territory which incorporate community service delivery and population health perspective as substantial components of their educational program	EXP-LR, P-LR Need for: interdisciplinary learning, broad understanding of health and its determinants, familiarity with CBHSs delivery, team approach, focus on promotion/prevention and early intervention, home visit experience	Education curriculum
	Proportion of practical experience gained by medical and other health services students in community versus institutional setting	P-LR	Educational institution records
	Presence of formal linkages between CBHSs organizations and medical and health services training programs	EXP-SV	Records Organizational charts Committee membership lists

PROVIDER SKILLS ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Formal Providers *continued*	Presence of effective strategies for encouraging employment in underserviced areas	P-LR Important for addressing equity. Strategies suggested in literature review include: recruitment of interested students, provision of educational experiences to prepare for work in underserviced areas, hiring faculty with experience in area, using curriculum which includes emphasis on other cultures and primary health services, having CBHSs instructors closely linked to training facilities and providing government incentives and regulations	Provincial policies Educational institution policies Organization records
Indigenous Workers	Percent of indigenous workers (informal and formal providers) who have received adequate training for delivering services required of them	P-ST Proposed based on evidence regarding the need for careful selection and training of volunteers	Organization records Survey Interview

OCCUPATIONAL REGULATION (primarily responsibility of provincial/territorial government)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Regulatory Boards	Composition of regulatory boards	P-LR	Membership lists
	Presence of composite versus individual occupation regulatory boards	P-LR	Provincial and Board records
	Proportion of public members and consumers on professional regulatory boards	P-LR	Membership lists
Types of Occupational Regulation	Availability of alternatives to occupational regulation	P-LR e.g., institutional licensing, quality assurance programs	Provincial policy Association records
	Absence of unjustifiable exclusive scopes of practice	P-LR	Legislation/regulation Association records
	Regulation of potentially risky procedures	P-LR Suggested alternative to regulation of occupations	Legislation/regulation
	Availability of alternatives to licensure	P-LR e.g., regulation, certification	Legislation/regulation Association records
	Use of competency-based approach to assessing qualifications	P-LR Suggested alternative to relying solely on formal education credentials	Legislation/regulation Association records
Recognition of Alternative Providers	Province/territory recognizes legal status for service providers with demonstrated cost-effectiveness	EMP Evidence for supporting the use of nurse practitioners, midwives, dental therapists/ nurses. Others suggested include rehabilitation assistants and multi-skilled workers.	Legislation/regulation
	Accreditation standards allow the use of alternative providers and multi-skilled workers with demonstrated effectiveness	P-LR	Accreditation standards
	Absence of organizational policies unjustifiably restricting the use of alternative providers with demonstrated effectiveness	P-ST	Organizational policies

OCCUPATIONAL REGULATION ~ (Continued)			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Least Restrictive Occupational Regulation for Protecting Public's Health and Safety	Absence of legal restrictions on competitive practices	EMP Evidence suggests restrictions on advertising, price competition and type of employment lead to higher cost services and potentially to reduced service access	Legislation/regulation
	Presence of reciprocal licensing arrangements with other provinces/countries	EMP Evidence suggests that lack of reciprocal licensing arrangements is related to higher service costs	Provincial policy

FUNDING			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Organizational Funding Model	Presence of needs adjusted population-based funding model	P-LR Literature proposes that population-based funding with adjustment for health need potentially addresses equity; however, methodo-logical difficulties exist with identifying appropriate measures of health need	Provincial policy
Provider Reimbursement	Percent of CBHSs physicians remunerated through non fee-for-service payment mechanisms	EMP Some evidence that non fee-for-service funded physicians working in community settings results in system level efficiencies and that quality of care is at least as good as in fee-for-service private practice settings.	Organization records
	Percent of other CBHSs providers remunerated through non fee-for-service payment mechanisms	P-ST Conclusions from physician reimbursements may be applied to other service providers (e.g., dentists, physical therapists)	Organization records
	Presence of government incentives for encouraging non fee-for-service remuneration	P-ST	Provincial policy

GOVERNANCE			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Board Appointment	Type of appointment mechanism, i.e., - Political - Descriptive - Substantive	P-LR Some indication that general elections not necessarily related to increased accountability to community; suggestion that inclusion of representatives of other community agencies good method of achieving community representativeness	Legislation Government policy Organizational policy
Community Participation in Decision-Making	Primary method of decision-making regarding policy decisions: - Information sharing only - Consultative - Power sharing - Lay participation /control	P-LR Literature suggests that level of participation can be categorized along a continuum -from token involvement through lay control; no empirical evidence found regarding the relative effectiveness of varying levels of community involvement	Organizational records
Provincial/Territorial Mandate	Mandate for governing body is clearly stated in legislation	P-ST	Legislation
Board Skills	Proportion of governing body understanding mandate and possessing requisite skills	EXP-SV, P-LR Most important Board skills indicated are: leadership (including communication), knowledge of issues and community, ability to mobilize constituents, and technical skills such as understanding organizational administration	Survey
	Presence of Board orientation program and ongoing Board development mechanisms	EXP-SV	Organization records

ORGANIZATIONAL STRUCTURE			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
Organizational Structure	Personnel organized under a program or matrix rather than functional (i.e., discipline) structure	EXP-SV Some indication that program or modified matrix structure results in better integration of disciplines and client-oriented care	Organizational chart
	Flat hierarchical structure	EXP-SV Flat structure noted to be important for greater flexibility and problem solving required in dynamic environment and with complex issues	Organizational chart

INFORMATION SYSTEMS			
DIMENSION	**INDICATOR**	**COMMENTS**	**DATA SOURCE**
CBHSs information systems	Presence of efficient CBHSs information systems which enable: - management decision-making - health status monitoring - efficient service delivery processes - evaluation	P-SV	Audit
	Evidence of support for development and maintenance of information system(s)	P-ST	Organization records Survey
Data resource libraries	Consumer/provider access to computerized health information databases	EXP-SV	Survey
	Consumer access to information on treatment alternatives (e.g., video, brochures)	EXP-SV, P-LR	Audit